113-679

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~1141.~~ ~~223~~ ~~472~~ 153

CHARLES E. BLAKE, APPELLANT,

vs.

THE CITY AND COUNTY OF SAN FRANCISCO, DAVID SCANNELL, A. T. BRYANT, G. E. SLOSS, GUS. REIS, EDWADR FLAHERTY, PETER HOPKINS, AND CHARLES FIELD.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF CALIFORNIA.

FILED NOVEMBER 10, 1881.

SUPREME COURT OF THE UNITED STATES.

No. 1141.

CHARLES E. BLAKE, APPELLANT,

vs.

THE CITY AND COUNTY OF SAN FRANCISCO, DAVID SCANNELL, A. T. BRYANT, G. E. SLOSS, GUS. REIS, EDWARD FLAHERTY, PETER HOPKINS, AND CHARLES FIELD.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF CALIFORNIA.

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a UNITED STATES OF AMERICA, *ss:*

To the City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus Reis, Edward Flaherty, Peter Hopkins, and Charles Field, greeting:

You are hereby cited and admonished to be and appear at the Supreme Court of the United States, to be held in the District of Columbia, on the second Monday of October, A. D. 1881, pursuant to an order allowing an appeal from the final decree of the circuit court of the United States, and for the district of California, in the cause wherein Charles E. Blake is appellant, and The City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field are appellees, to show cause, if any there be, why the said decree in the said order mentioned should not be corrected and speedy justice should not be done to the parties in that behalf.

Witness the honorable Lorenzo Sawyer, judge of the U. S. circuit court in and for the district of California, this 19th day of April, A. D. 1881, and of the Independence of the United States the 105th.

[SEAL.] LORENZO SAWYER,
U. S. Circuit Judge, Ninth Judicial Circuit.

b (Indorsed:) ✗ 2009. United States Supreme Court. Charles E. Blake, appellant, vs. The City and County of San Francisco et al., appellees, citation.

Service of a copy of the within citation is hereby acknowledged, this 26th day of May, A. D. 1881.

W. C. BURNETT,
Solicitors for Appellees.

Filed 28th May, 1881. L. S. B. Sawyer, clerk, by J. T. O'Beirne, deputy clerk.

1 *Subpœna.*

UNITED STATES OF AMERICA:

Circuit court of the United States, ninth circuit, district of California.
In equity.

The President of the United States of America, greeting, to the City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field:

You are hereby commanded that you be and appear in said circuit court of the United States aforesaid, at the court-room in San Francisco, on the first Monday of January, A. D. 1879, to answer a bill of complaint exhibited against you in said court by Charles E. Blake, who is a citizen of the State of California, and to do and receive what the said court shall have considered in that behalf. And this you are not to omit, under the penalty of five thousand dollars.

Witness the honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, this 4th day of December, in the year of our Lord one thousand eight hundred and seventy-eight, and
2 our Independence the 103d.

[SEAL.] L. S. B. SAWYER, *Clerk.*
By J. F. O'BEIRNE, *D'p'y Clk.*

MEMORANDUM.—Pursuant to rule 12, Supreme Court U. S., you are hereby required to enter your appearance in the above suit on or before the first Monday of January next, at the clerk's office of said court, pursuant to said bill; otherwise the said bill will be taken pro confesso.

L. S. B. SAWYER, *Clerk*,
By J. F. O'BEIRNE, *D'p'y Clk.*

U. S. MARSHAL' OFFICE,
District of Cal.:

I hereby certify that I received the within subpœna on the 4th day of Dec'r, 1878, and personally served the same on the 7th day of Dec., 1878, by delivering to and leaving with David Scannell, G. E. Sloss, Peter Hopkins, & Chas. Field, and on the 10th day of Dec., 1878, A. J. Bryant, mayor of the city & county of San Francisco, A. J. Bryant, Gus. Reis, & Eder Flaherty, said defendants, named therein personally, at the city and county of San Francisco in said district a certified copy thereof, together with a certified copy of bill of complaint attached thereto.

3

A. W. POOLE,
U. S. Marshal,
By HORACE BACON, *Deputy*.

SAN FRAN , *Dec.* 11*th*, 1878.

(Endorsed:) Filed Dec. 17, 1878. L. S. B. Sawyer, clerk, by J. F. O'Beirne, d'p'y cl'k.

4,5 *Bill of complaint.*

To the honorable the justices of the circuit court of the United States for the ninth circuit, within and for the district of California, sitting in equity:

Charles E. Blake, of San Francisco, in the State of California, brings his bill of complaint against the City and County of San Francisco, a corporation duly organized and existing under the laws of the State of California, and David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field.

And thereupon your orator complains and says:

That heretofore, to wit, before the fourth day of February, in the year one thousand eight hundred and sixty-four, Thomas H. Bailey, of Troy, New York, was the original and first inventor of a certain new and useful invention, to wit, improvements in relief valves for water-cylinders.

That the same was a new and useful invention, and consisted in
6 the combination and arrangement of devices described and claimed in the letters patent attached hereto and forming a part of the complaint.

That the same was not known or used by others before the invention of the said Thomas H. Bailey, and at the time of said Bailey's application for a patent therefor had not been in public use or on sale for two years, nor abandoned, nor was it proved to have been abandoned.

That the said Thomas H. Bailey, being, so as aforesaid, the inventor thereof, on the ninth day of February, A. D. 1864, upon due application therefor, did obtain the letters patent of the United States for the said invention, granting and securing to him, his heirs and assigns, for the full term of seventeen years from the last-named date, the full and

exclusive right and liberty of making, constructing, using, and vending to others to be used the said invention and improvement throughout the United States and the Territories thereof.

Said letters patent were issued in due form of law, under the seal of the Patent Office of the United States, and were signed by the
7 Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, and bore date the day and year last aforesaid, a description whereof and of said invention more fully appears in said letters patent, which said letters patent are in due form of law, and are ready in court to be produced by the plaintiff, or a duly authenticated copy thereof.

And your orator further shows that by a regular chain of assignment made in writing, and recorded in the United States Patent Office, all the property in said letters patent, and all rights and liberties by them conferred, had been granted and conveyed by and from Bridget Wallace, administratrix of Thomas H. Bailey, deceased, before the 1st day of September, A. D. 1877, to your orator.

That afterwards, to wit, on the 18th day of September, A. D. 1877, upon due application therefor, and upon the surrender to the Commissioner of Patents of the United States of the letters patent last aforesaid, new letters patent were duly issued to your orator, as the assignee of Bridget Wallace, administratrix of Thomas H. Bailey, de-
8 ceased, for the same invention for the residue of the period then unexpired, for which the said original patent was granted; that the letters patent so reissued were issued in due form of law, under the seal of said Patent Office, and were signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents of the United States, and were dated the day and year last aforesaid, and were delivered to your orator, whereby there was secured to your orator, his heirs or assigns, for the residue of said term of seventeen years from the said ninth day of February, A. D. 1864, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention hereinbefore mentioned and described, a description whereof, and of said invention, more fully appears in said reissued letters patent, which said reissued letters patent are in due form of law, and are attached hereto and form a part of this complaint.

And your orator says that he is still the owner and holder of said reissued letters patent, and of the rights, privileges, and liberties by them granted.

9 That prior to the issuing of said letters patent, all proceedings were had and taken which were required by law to be had or taken previous to the issuance of letters patent granting special rights and liberties for new and useful inventions.

And your orator further shows unto your honors that always since the grant of the said letters patent, in the exercise of the full and exclusive right and liberty so granted as aforesaid, he has made, constructed, used, and vended to others to be used, the said improvement so patented, and has had and maintained, until the infringement hereinafter complained of, and has remained in possession of the said improvement and invention under and by virtue of said reissued letters patent, and has never acquiesced in any invasion or infringement of his said rights.

And your orator further shows unto your honors that the respondents herein, having full knowledge of the premises, and in violation of your orator's exclusive right, liberty, and privilege as afore-

10 said, and utterly disregarding the same, have, since the said 18th day of September, 1877, and before the filing of this bill of complaint, without the license of your orator, at San Francisco, California, in the said district of California, and within the jurisdiction of this honorable court, used, and still continue to use, many fire-engines embracing the improvements and invention described in said reissued letters patent and so secured to your orator as aforesaid, how many your orator is unable to say, but prays that the respondents may discover and set forth in their answer to this bill.

And your orator alleges that the fire-engines used by the respondents are infringements of said reissued letters patent, and were provided with automatic relief-valves made according to the invention therein described and thereby protected and secured to your orator as aforesaid, and contrary to law and the form of the statutes of the United States in such cases made and provided.

11 And your orator shows that he is informed and believes, and so states to be true, that the respondents in this action intend to continue to infringe upon said letters patent, and to unlawfully use said invention, as they have already been doing.

Your orator further shows that he has requested the respondents to desist from the use of said invention and to account to your orator for the damages which he has sustained, but that the respondents refuse either to so desist or account.

And your orator further shows unto your honors that he will be subject to great and irreparable injury unless he shall obtain from your honors the relief hereby sought.

To the end, therefore, that the said respondents may, upon their corporal oath, full, true, direct, and perfect answer make to all and singular the matters hereinbefore stated and charged, as fully and particularly as if the same were hereinafter repeated, and thereunto distinctly interrogated according to the best of their knowledge, information,

12 and belief, and more especially that they may answer and set forth—

1st. Whether they have not used before the filing of this bill large numbers of fire-engines in which an automatic relief-valve was combined with the engine and hose so as to relieve the water pressure in the hose when an unusual strain was brought to bear upon it, and how many, and how the same are constructed?

2d. Whether they have not on hand a large number, and how many fire-engines in which an automatic relief-valve is used for relieving the water pressure in the hose when an unusual strain is brought to bear upon it, and how the same are constructed?

And that the said respondents may answer the premises and may be decreed to account for and pay over to your orator all such gains and profits as have or might have accrued to them using said improvements in connection with the fire-engines used by them in the said city

13 and county of San Francisco, California.

And your orator further prays this honorable court to assess or cause to be assessed the damages which the complainant has sustained by reason of the premises and the infringement herein complained of, and that said damages, when so assessed, may be increased to an amount not exceeding three times the sum at which they shall be assessed; and that the respondents, the City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field, be adjudged and decreed to pay to your orator the dam-

ages so assessed, and also the amount to which they may be increased, in addition to the gains and profits above prayed for.

And your orator further prays that the respondents herein, the City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field, their agents, attorneys, clerks, employees, officials, and workmen, may be restrained by an injunction issuing out of this honorable court
14, 15 from using or transferring in any way fire-engines, embracing the improvements aforesaid so secured to your orator as aforesaid, and for such other and further relief as the nature of the case may require, and to your honors may seem meet.

May it please your honors to grant unto your orator not only a writ of injunction conformable to the prayer of this bill, but also the writ of subpœna directed to the said City and County of San Francisco, David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field, commanding them to appear and answer this bill of complaint, and to do and receive what to your honors shall seem meet.

And your orator will ever pray, &c.

BOONE & WAYMIRE,
Solicitors for Complainant.

GREATHOUSE & BLANDING,
Of Counsel.

STATE OF CALIFORNIA,
City and County of San Francisco:

16 Charles E. Blake, being first duly sworn, says that he is the complainant in the said action; that he has read the foregoing bill of complaint, and knows the contents thereof; that the same are true and of his own knowledge except as to the matter therein stated on information and belief, and as to those matters he verily believes them to be true.

CHAS. E. BLAKE.

Subscribed and sworn to before me this eleventh day of November, 1878.

JOS. F. O'BEIRNE,
Comm'r of U. S. Circuit Court, Cal.

(Endorsed:) Filed November 11, 1878. L. S. B. Sawyer, clerk, by J. F. O'Beirne, d'p'y cl'k.

17 *Answer.*

In the U. S. cir. court, ninth circuit, dist. of Cal'a.

CHAS. E. BLAKE
vs.
THE CITY & COUNTY OF SAN FRANCISCO et als. } No. 2009.

The defendant, by W. C. Burnett, her attorney, comes and answers the complaint or bill in said cause.

Denies generally each and every allegation thereof. Wherefore defendant asks judgment against plaintiff for costs.

Dated February 25th, 1879.

W. C. BURNETT,
Def't's Solicitor.

(Endorsed:)
Service of a copy of the within is hereby admitted, this 25th day of Febr'y, 1879.

JNO. L. BOONE,
Pl'ff's Att'y.

Filed Febr'y 25th, 1879. L. S. B. Sawyer, clerk, by J. F. O'Beirne, d'p'y cl'k.

18, 19 *Answer.*

In the circuit court of the United States in and for the ninth judicial circuit, district of California.

CHARLES E. BLAKE, COMPLAINANT,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO, a corporation; David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field, defendants.

The answer of defendants, The City and County of San Francisco, a corporation; David Scannell, Gus. Reis, Edward Flaherty, Peter Hopkins, and Charles Field, to the bill of complaint of Charles E. Blake against them.

These defendants now and at all times hereafter saving and reserving to themselves all and all manner of benefits and advantages of exception whatsoever, which can or may be had or taken to the manifold errors, uncertainties, imperfections, and insufficiencies in the said bill of complaint contained for answer thereunto, or so much
20 and such parts thereof as defendants are advised it is material and necessary for them to make answer unto, answering, say—

Defendants admit that Thomas H. Bailey did obtain letters patent of the United States for an improvement in relief-valves for water-cylinders, dated the 9th day of February, 1864, being the letters patent in the bill of complaint herein first mentioned, but they deny, upon information and belief, that the said Thomas H. Bailey was at the time or times alleged in the said bill of complaint, or at any other time, or at all, the original or first inventor or discoverer of the device or devices, or combination or improvement, in said letters patent described or referred to, or that the same was not known or used by others before the alleged invention thereof by the said Bailey, at the time of the application of the said Bailey for the said patent, or that the same had not been in public use or on sale for two years prior to said application.

And defendants, further answering, deny, upon information
21 and belief, that prior to the issuing of the letters patent first in the bill of complaint mentioned all proceedings were had and taken which were required by law to be had and taken previous to the issuance of said letters patent, but defendants, upon information and belief, aver that said letters patent ought not to have been granted or issued, and deny that the complainant or his grantors have or had acquired any right or rights whatsoever under or by virtue of said letters patent.

And defendants, further answering, aver that they have not sufficient knowledge in regard to the assignment or grant of said letters patent alleged in the bill of complaint to have been made by or

from Bridget Wallace, administratrix of Thomas H. Bailey, deceased, before the first day of September, 1877, to the complainant to answer thereto, and they therefore pray that complainant be compelled to present to your honor satisfactory proof of the same.

These defendants admit that upon the 18th day of September, 1877, a reissue of the letters patent to Thomas H. Bailey, and first in
22 the bill of complaint mentioned, was issued to complainant as the assignee of Bridget Wallace, administratrix of Thomas H. Bailey, deceased, but deny that such reissue of said letters patent was for the same invention described or embraced within the original letters patent issued to Thomas H. Bailey in the bill of complaint mentioned, and deny that by such reissue there was secured to complainant, his heirs or assigns, for any time whatever, the full or exclusive right or liberty of making, constructing, or using, or vending to others to be used, the said invention in the bill of complaint mentioned and described.

And these defendants deny that prior to the issuing of said letters patent all proceedings were had or taken which were required by law to be had or taken previous to the issuance or reissuance of letters patent granting special rights or liberties for new and useful inventions, and these defendants aver, upon information and belief, that said letters patent in the bill of complaint secondly mentioned ought
23 not to have been issued, or reissued, or granted, and deny that the complainant or his grantors have or had acquired any rights whatsoever under or by virtue of said letters patent.

These defendants, further answering, deny, upon information and belief, that always since the grant of said letters patent, or at any time whatever, plaintiff or his assignor has made or constructed or used or vended to others to be used the said improvements so patented, or has had or maintained for any time whatever, or has remained in the possession of said improvement or invention under or by virtue of said reissued letters patent, or has never acquiesced in any invasion or infringement of his said rights.

And these defendants, further answering, deny that, in violation of any right, liberty, or privilege whatever of complainant or in anywise disregarding the same, they or any or either of them have at any time
24 whatever used or continued to use many or any fire-engines embracing the improvements or invention described in said reissued letters patent, or secured to complainant as in the complaint alleged, or that complainant could not ascertain the number of fire-engines in use by the San Francisco fire department, and these defendants deny that the said fire-engines in use by defendant, the City and County of San Francisco, or any of them, are infringements of said reissued letters patent, or were or are provided with automatic relief-valve made according to the invention therein described, or thereby protected or secured to complainant as in the complaint alleged, or at all or contrary to law, or to the statute in such case made and provided.

And these defendants deny that they so infringe or intend to continue to infringe upon the letters patent in the complaint mentioned, or either of them, or to unlawfully use said invention or that they have already been so doing.

And these defendants deny that complainant will be subject to
25 great or irreparable injury or will be subjected to any injury whatever if he fail to obtain from your honor the relief hereby sought.

And these defendants, answering the first interrogatory of complainant, aver:

That the defendant, the City and County of San Francisco, is using fifteen fire-engines provided with a combined automatic and churn valve for the purpose of relieving the hose from any unusual pressure, and that the said valve is the same valve described in and secured to G. S. Orr by letters patent of the United States numbered 153045, and these defendants aver that there is secured to said G. S. Orr by said letters patent last aforesaid the exclusive right and liberty of making, constructing, using, and vending to others to be used, the said valve in use by the corporation defendant, and these defendants, further answering said first interrogatory, aver that the other defendants, Scannell, Bryant, Sloss, Reis, Flaherty, Hopkins, and Field are not
26 using and have not on hand any fire-engines whatever.

And for answer to the second interrogatory of complaint these defendants refer to the answer to the first interrogatory herein as an answer thereto.

And these defendants, further answering, say and give notice that they will endeavor to prove in this action, and will, upon the hearing of this cause, insist that the inventions and discoveries alleged to have been invented or discovered by the said Thomas H. Bailey had been and each and all of them had been in public use and on sale in this country with his consent and allowance for more than two years prior to his application for a patent therefor, and that the same were in notorious public use and were described in scientific publications and journals of general circulation upon the steam-engine many years before the application for a patent by said Bailey.

And these defendants, further answering, say and give notice
27 that they will endeavor to prove in this action, and will, upon the hearing of this cause, insist by way of defense that the said Thomas H. Bailey's pretended inventions and discoveries described in and claimed in the said original letters patent and the said reissued letters patent had been abandoned to the public long prior to said Bailey's application therefor.

Without this that any other matter or thing in the said bill of complaint contained and not herein and hereby well and sufficient' answered unto, confessed, and avoided, traversed, or denied, is true.

All of which matters and things these defendants are ready and willing to aver, maintain, and prove, as this hon. court shall direct. And they pray to be hence dismissed, with their reasonable costs and charges in this behalf most wrongfully sustained.

W. C. BURNETT,
Solicitor for Defendants.

COWDERY & PRESTON,
Of Counsel.

28 STATE OF CALIFORNIA,
City and County of San Francisco, ss:

Andrew J. Bryant, being duly sworn, says that he is one of the defendants in the above-entitled action, and that he is the duly elected, qualified, and acting mayor of the corporation defendant, the City and County of San Francisco; that he has read the foregoing answer, and knows the contents thereof, and that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and as to those matters that he believes it to be true.

A. J. BRYANT.

Subscribed and sworn to before me this 9th day of April, A. D. 1879.
L. S. B. SAWYER,
Com'r U. S. Circuit Court, Dist. Cal.

(Endorsed:)
Service hereof by copy had this 9th April, 1879.
BOONE & WAYMIRE,
Solicitors for Complainants.

Filed 9' April, 1879. L. S. B. Sawyer, clerk.

29 *Replication.*

Circuit court of the United States for the district of California, ninth judicial circuit.

CHARLES E. BLAKE, COMPLAINANT,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO et al., defendants.

The replication of Chas. E. Blake, complainant, to the answer of The City and County of San Francisco et al., defendants.

This repliant, saving and reserving to himself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto, saith that he will aver, maintain, and prove said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the defendant is uncertain, untrue, and insufficient to be replied unto by this repliant; that any other matter or
30 thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true.

All of which matters and things this repliant asserts, and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray as in and by his said bill he has already prayed.
JNO. L. BOONE,
Solicitors for Complainant.

C. R. GREATHOUSE,
Of Counsel.

(Endorsed:)
Service of the within replication and receipt of a copy thereof admitted this 23d day of April, 1879.
W. C. BURNETT,
Attorney for Defendant.

(Endorsed also:) Filed 23d day of April, A. D. 1879. L. S. B. Sawyer, clerk.

31 *Decree.*

At a stated term, to wit, the July term, A. D. 1880, of the circuit court of the United States of America, of the ninth judicial circuit, in and for the district of California, held at the court-room in the city and county of San Francisco, on Tuesday, the seventeenth

day of August, in the year of our Lord one thousand eight hundred and eighty.

Present, the honorable Lorenzo Sawyer, circuit judge.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO.

The complainant herein filed his bill of complaint, which is hereto annexed, on the 11th day of November, A. D. 1878.

Thereupon a subpœna to appear and answer herein was issued, returnable on the first Monday of January, A. D. 1879, and service thereof made upon the defendant prior to the return day thereof;
32 said subpœna, with the marshal's return of service, is hereto annexed.

The defendants appeared herein, by W. G. Burnett, esq., as solicitor, and Preston & Cowdery, esquires, of counsel, and filed two answers, one on the 25th day of February, A. D. 1879, and the other on the 9th day of April, A. D. 1879, both of which answers are hereunto annexed.

On the 23d day of April, A. D. 1879, a replication to the answers was filed, and is hereto annexed.

On the 17th day of August, A. D. 1880, a final decree was filed and entered herein, in the words and figures following, to wit:

At a stated term, to wit, the July term, A. D. 1880, of the circuit court of the United States of America, of the ninth judicial circuit, in and for the district of California, held at the court-room in the city and county of San Francisco, on Tuesday, the 17th day of August, in the year of our Lord one thousand eight hundred and eighty.
33 Present, the honorable Lorenzo Sawyer, circuit judge.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO. } No. 2009. Decree.

This cause having come on to be further heard at this term, and was argued by counsel, and thereupon, upon consideration thereof, it is ordered, adjudged, and decreed that the complainant's bill herein be, and the same hereby is, dismissed, and that complainant pay defendants its costs in this behalf expended.

(Signed) LORENZO SAWYER,
U. S. Circuit Judge, Ninth Jud'l Circuit.

(Endorsed:) Filed & entered August 17, 1880. L. S. B. Sawyer, clerk.

34, 35 *Memorandum of costs & disburs'ts.*

UNITED STATES OF AMERICA:

In the circuit court of the United States of the ninth circuit, in and for the district of California.

CHAS. E. BLAKE, PLAINTIFF,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO et al., defendants. } Memorandum of costs and disbursements.

DISBURSEMENTS.

Marshal's fees	$
Clerk's fees	$26 70

Witness' fees: Stockman: 1 day; Purdy, 2 days; Stoddard, 1 day; Deacon, 2 days; Rainey, 2 days	12	
Examiner's fee	99	80
Fees for attending & taking deposition of Chas. E. Blake, $2.50; John M. Stockman (on two occasions), $5; F. E. R. Whitney, $2.50; Jas. Stoddard, $2.50; Geo. Purdy (on two occasions), $5; Wm. Deacon (on two occasions), $5; Sam'l Rainey, 2.50	25	00
Docket fee	20	
Taxed at	$183	50

L. S. B. SAWYER, *Clerk.*

SEPT. 23d, 1880—10.30 a. m.

36 UNITED STATES OF AMERICA,
District of California,
City and County of San Francisco, ss:

E. F. Preston, being duly sworn, deposes and says that he is one of the solicitors for the defendants in the above-entitled cause, and as such is better informed relative to the above costs and disbursements than the said defendants.

That the items in the above memorandum contained are correct, to the best of this deponent's knowledge and belief, and that the said disbursements have been necessarily incurred in the said cause.

E. F. PRESTON.

Subscribed and sworn to before me this 23d day of August, A. D. 1880.

JOS. F. O'BEIRNE,
Commissioner U. S. Circuit Court, &c.

To John L. Boone, esq., solicitor, and W. H. L. Barnes, esq., of counsel for complainant:

You will please take notice that on Wednesday, the 25' day of August, A. D. 1880, at the hour of 10 o'clock a. m., we will apply to the
37 clerk of said court to have the within memorandums of costs and disbursements taxed pursuant to the rule of said court in such case made and provided.

W. C. BURNETT,
Solicitor for Defendants.

Service of a copy of the foregoing memorandum of costs and disbursements admitted this 23d day of August, A. D. 1880.

Time for taking costs is hereby extended thirty days from date hereof.

COWDERY & PRESTON,
Counsel for Defendant.

Dated August 24th, 1880.

(Endorsed:) Filed this 23' day of August, A. D. 1880. L. S. B. Sawyer, clerk, by J. F. O'Beirne, deputy clerk.

38 *Enrolled papers.*

Whereupon said pleadings, subpœna, final decree, and memoran-

dum of costs are hereto annexed, said decree being duly signed, filed, and enrolled pursuant to the practice of said circuit court.

Attest, &c.

[SEAL.] L. S. B. SAWYER, *Clerk*,
By J. F. O'BEIRNE, *D'p'y Clk.*

(Endorsed:) Filed 23d August, A. D. 1880. L. S. B. Sawyer, clerk, by J. F. O'Beirne, d'p'y cl'k.

39 In the circuit court of the United States for the district of California.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO. } In equity.

Be it remembered that on this 14th day of May, A. D. 1879, at my office in the city and county of San Francisco, State of California, before me, J. F. O'Beirne, an examiner in chancery, duly appointed by the circuit court of the United States for the ninth circuit and district of California, personally appeared Charles E. Blake, John M. Stockman, and F. E. R. Whitney, witnesses on behalf of the complainant in the above-entitled action, and James Stoddard, George Purdy, William Deacon, and Samuel Rainey, witnesses on behalf of the defendant.

J. L. Boone, esq., appeared as counsel for complainant and E. F. Preston, esq., as counsel for defendant.

40 And the said witnesses having been by me first duly sworn to tell the truth, the whole truth, and nothing but the truth in the cause aforesaid, did then and there depose and say as follows, that is to say:

C. E. Blake.

Examination-in chief of CHARLES E. BLAKE, by Mr. BOONE:

Q. 1. State your name, age, residence, and occupation.

A. Name, Charles E. Blake, senior; age, fifty-four or fifty-five years; residence, San Francisco; occupation, dentist.

Q. 2. Are you complainant in this action?

A. I am.

Q. 3. Do you recognize the letters patent, reissue number 7886, which I now present to you, issued to Charles E. Blake, assignee of Bridget Wallace, administratrix of Thomas H. Bailey, deceased, dated Sept. 18th, 1877?

A. (Referring.) Yes, that is my patent reissue.

(The letters patent above referred to are put in evidence by complainant, and marked Complainant's Exhibit A.)

Q. 4. What is that patent for?

(Objected to as incompetent, not being the best evidence, and as tending to bring forth only the opinion of the witness;

41 and further, that the testimony is incompetent because it does not appear that the witness is an expert, and no foundation has been laid for his testimony as such.)

A. For a safety-valve or relief-valve for fire-hose or steam fire-engines to be used for fire purposes.

Q. 5. Describe the invention and its use.

A. This valve is constructed of, first, a cylinder that is attached to the steam-pump, or attached to the arm of the butt of the engine, or, in fact, anywhere on the line of the hose; the action is just the same. The parts that form this valve are a valve-seat, a spring which holds the valve in its seat; there is a screw connected with it to give the proper tension to the spring. That is all arranged in the case; and the object is to give it any amount of pressure desired. For instance, if it is to carry a hundred pounds of water-pressure, the adjustment of the spring—the pressure by screwing down, that is, adjusted to a hundred pounds by the water-gauge on the engine, or the valve can be adjusted before that, and rated, but that is not necessary, so there is a
42 water-gauge on the engine. When the valve is set at a hundred pounds water-pressure there is no more water can get through the hose than that calls for, although the engine may work up to a hundred and fifty pounds no more water can get through the hose.

Q. 6. State the purpose of the invention.

(The same objection.)

A. The purpose of the valve is to relieve the pressure of the hose, so that if the water is turned off at the pipe by a stop-cock or any contrivance the valve will open and relieve the hose. The water can either be turned into the suction or into the street; that is optional in the construction of the valve.

Q. 7. Are you the inventor of that device covered by that patent?

(The same objections.)

A. No; this I have by purchase.

Q. 8. Who is the inventor of it?

A. Thomas H. Bailey.

Q. 9. How came you to be in possession of this patent?

(Objected to as incompetent, and as attempting to prove matters of record by parol evidence.)

A. By purchase; I purchased this patent.

43 (Complainant here puts in evidence deed, dated March 15, 1877, from Bridget Wallace, administratrix of the estate of Thomas H. Bailey, deceased, to Charles E. Blake, conveying the original letters patent for which Exhibit A is a reissue, marked Complainant's Exhibit B.

Objected to as incompetent, in that no foundation has been laid for its introduction, and in that it does not appear that Bridget Wallace was the administratrix of the estate of Thomas H. Bailey, deceased, and there is no authority shown to convey the interest of said estate in the patent as special administratrix; and, further, that it does not appear to have been confirmed by the surrogate's court of the county in which the authority purports to have been granted.)

Q. 10. This reissue number 7886, was issued directly to you?

A. Yes, sir.

Q. 11. Upon your application?

A. Yes, sir.

Q. 12. Have you seen the relief-valve used upon the fire-engines of the City and County of San Francisco?

A. I have.

44 Q. 13. Have you closely examined their construction and operation?

A. I have.

Q. 14. Are those relief-valves constructed similarly in principle to to the one described in the patent, Exhibit A?

(Objected to and withdrawn.)

Q. 15. I will ask you whether or not previous to purchasing this patent you were familiar with relief-valves for steam fire-engines?

A. I was.

Q. 16. Had you had any experience in their construction?

A. I had.

Q. 17. Fully understood their uses?

A. Yes, sir; I do and did then; perhaps constructed more than any other man.

Q. 18. Now, I will ask you whether the relief-valves which you saw in use on the fire-engines in the City and County of San Francisco were constructed similarly and used for the same purpose as the relief-valve described in Exhibit A?

(Objected to as incompetent, in that proper foundation has not been laid to show that the witness is an expert, to entitle him to testify as such.)

45 A. They were the same principle as this of mine; the same action.

Q. 19. Were the relief-valves which were used on the engines of the City and County of San Francisco automatic?

(The same objection.)

A. They were.

Q. 20. How were they used?

A. They were used upon the engine.

Q. 21. In what connection were they used—those used by the City and County of San Francisco?

A. The manner in which they were attached to the engine?

Q. 22. Yes; and in what combination were they used? Was the valve used in connection with an engine, or engine and hose, or how?

A. It was attached to the engine, and not to the hose. The valves now in use by the city are attached to the engine.

Q. 23. What is the real purpose of the valve as it is used in the city here on the engines?

(The same objection.)

A. The real object of the valve now, as it was used, is to permit a stop-cock to be placed upon the pipe or nozzle, for the purpose of

46 turning the water off and on at will. For instance, if you wish to stop it instantly you can do so, and the valve relieves the pressure of the water, and the engine still keeps running; and also, at the same time, it regulates the certain amount of water-pressure which the chief engineer wishes to carry. The valve is set at that amount, whether it is eighty, a hundred, or a hundred and twenty-five pounds. It has the advantage of saving any strain on the hose, as well as the object of turning the water in the pipe off and on.

Q. 24. Have you seen the relief-valve used by the city in operation?

A. I have.

Q. 25. Did it operate in the same manner described in the letters patent, Exhibit A?

(The same objection.)

Q. Do you mean would it operate?

Q. 26. Did it operate in the same way that this was intended to when you saw it in use?

A. Yes; precisely.

47 Cross-examination by Mr. PRESTON:

Q. 1. The assignment, so called, which was offered in evidence and marked Exhibit B, is the only assignment and the only document

under which you claim title to the original patent issued to Thomas H. Bailey?

A. Yes, sir.

Q. 2. There is no other?

A. No other.

Q. 3. What has been your business during your residence in San Francisco?

A. My profession is that of a dentist.

Q. 4. Have you followed that profession as a means of obtaining livelihood since you have resided here?

A. Not altogether, sir; no, sir.

Q. 5. How long have you lived here?

A. Do you mean off and on—at different periods altogether?

Q. 6. How long have you been engaged in business here; yes, sir.

A. I came here on the 10th of January, 1850. I haven't been in the city all the time, but I have been here off and on.

Q. 7. In the State?

48 A. In the State, except that I have been East several times.

Q. 8. Simply on visits?

A. That is all.

Q. 9. What business have you followed as a means of obtaining a livelihood since 1850?

A. I have followed mining and machinery, at different times.

Q. 10. When you followed the machinery business, in what branch of it were you engaged?

A. Well, constructing various things.

Q. 11. What?

A. Well, I have worked at constructing brass-work—at relief-valves for steam fire-engines.

Q. 12. How long were you engaged in that business.

A. Off and on.

Q. 13. How long a time have you been actually engaged in that business as a means of obtaining your living?

A. Well, I worked at that at different periods.

Q. 14. How long, in the aggregate, have you supported yourself by constructing relief-valves?

49 A. I don't know that I supported myself at all at that business.

Q. 15. During the time that you were engaged in constructing relief-valves you were in business here as a dentist, were you?

A. Yes, sir.

Q. 16. You looked to your profession of dentistry as a means of support, did you not?

A. Yes, sir.

Q. 17. And your following the business of constructing relief-valves was in the nature of experimenting and constructing the same with a view to obtaining patents, was it not?

A. With a view to making a new invention—new improvements.

Q. 18. Did you ever sell any valves?

A. No; I can't say that I ever made a sale.

Q. 19. Did you ever buy any valves, or buy anything pertaining to valves other than the material used and the tools necessary to prosecute your experiments?

A. No, sir.

Q. 20. Then your experience as an expert in valves, and your opinion

as such given here, are based entirely upon the knowledge which
50 you acquired in your experimental work upon relief-valves?

A. Not altogether.

Q. 21. From what other sources did you derive your information?

A. Do you mean since I commenced or before?

Q. 22. Since you commenced.

A. Since I commenced there has been various infringements by other parties. I claim to be the original of the safety-valve men—the first to make a practical use of it.

Q. 23. When was that?

A. When was the first demonstration?

Q. 24. When was the first demonstration by you?

A. The first demonstration—the first experiments might have been, perhaps, in 1868, but I didn't bring it out fully until 1869.

Q. 25. Was that prior or subsequent to the date of the issue of the patent to Bailey?

A. That was subsequent to Bailey's patent.

Q. 26. Whom do you regard as the real inventor, Bailey or yourself?

A. I know now that Bailey was, but at that time I supposed
51 myself to be the originator of the principle.

Q. 27. Does your experience in connection with relief-valves extend beyond their application to steam fire-engines?

A. Do you mean relief valves for water?

Q. 28. I will change the question. Does your experience in connection with automatic relief-valves extend beyond their application to steam fire-engines?

A. There is valves for steam attached to steam-boilers.

Q. 29. Automatic valves?

A. Yes, sir. Automatic valves?

Q. 30. Do you know of them when you were prosecuting your discoveries?

A. I think I did.

Q. 31. Was the principle in any way similar to the one involved in your valve?

A. I think the principle—the construction is different, but the principle of relief to steam may be the same as that of water.

Q. 32. You knew, then, at the time that you were prosecuting your researches, of a valve applied to steam from which the same prac-
52 tical result was reached, so far as the steam was concerned, as is reached by your valve when applied to water?

A. The same valve that is on a steam-boiler—the valve is the same in principle, but the construction is different.

Q. 33. Are you acquainted with the construction of the ordinary safety-valve used on steam-boilers?

A. Yes, sir.

Q. 34. Do such valves have a spring pressure upon the valve to keep it down, which spring is adjusted?

A. Some do and some do not. Some have weights.

Q. 35. Would such valves be applicable to interpose between the water-cylinder of a steam fire-engine and the base, for the purpose of relieving sudden pressure which might be brought upon the hose?

A. The valve-seat and the weight, properly constructed, attached to a steam fire-engine, would have the action desired.

Q. 36. Does this valve of Bailey's resemble in its construction the safety-valve of a steam-boiler?

53 A. What kind of a safety-valve for a steam-boiler do you refer to?

Q. 37. One with an adjustable spring.

A. One on a steam-boiler with an adjustable spring. This one of Bailey's would be somewhat similar. The action would be the same, but of course——.

Q. 38. Give the difference.

A. A valve on a steam-pump adjusted with a spring, the valve would be placed on its seat, and kept down by a spring. That spring of course is adjustable. Now, when there is a pressure of steam over and above what the steam-boiler is allowed to carry—they are all rated, you know—that valve would rise, and the steam would escape all out from the top of the boiler. Now, this valve for the steam fire-engine, when there is an over-pressure of water, more than what it is set for, you understand that valve would raise; but instead of the water splashing all round, it is controlled, and can be turned back into the suction, or can be turned on to the ground.

54 Q. 39. The difference, then, as I understand you, is in the disposition of the water which passes through the valve?

A. That is one difference.

Q. 40. What is the other difference?

A. It is different in construction, because the water-valve is constructed to apply to a particular place.

Q. 41. What is the other difference?

A. I don't claim the spring entirely, you understand.

Q. 42. I am not talking about your claim. I want to know the difference.

Mr. BOONE. We will admit that the principle of the valve described in the Bailey patent is not new, as a safety-valve.

Q. 43. Mr. PRESTON. Did you ever know or hear of the automatic relief-valve in connection with a steam-pump and water-cylinder other than steam fire-engines prior to the issuance of your patents?

A. No, sir.

Q. 44. If you had known of such an application of an automatic relief-valve, would you have considered the Bailey valve a new

55 invention?

A. For the purpose intended, I should.

Q. 45. By "the purpose intended" you mean that it would be a new invention to apply it to a portable steam-pump, or, in other words, to a steam fire-engine?

A. Any steam fire-apparatus; it may be portable and it may be stationary.

Q. 46. Would you have drawn any distinction between a steam fire-engine and any other portable steam-pump?

A. Would I when at the time I constructed it, do you mean?

Q. 47. Had you learned of the application of automatic relief-valves for the relief of water-cylinders, whether made of rubber, or leather, or brass, or anything else used in connection with steam-pumps, at the time you were prosecuting your experiments, would you have considered that the application of such an automatic relief-valve to a portable steam-pump would have been a new or novel invention?

56 A. Portable steam-pump and hose attached?

Q. 48. Yes. You use the word hose, and I say water-cylinder.

A. For water purposes?

Q. 49. Not for water purposes. I am asking the broad question. I

am asking you the question as expert. What I want to get at is this: I asked you a question as to whether or not you had learned or knew at any time that an automatic relief-valve had been used in combination with a water-cylinder and steam-pump for the purpose of relieving the pressure of the water in the cylinder——

A. And I said I never had known of any.

Q. 50. Now, I ask another question, going not to this case, but as to your general opinion as an expert, whether, had you become in possession of the fact that an automatic relief-valve had been used in combination with a water-cylinder and a steam-pump, for relieving the pressure of water in the water-cylinder—whether, had you known
57 that, you would have considered the application of that combination to a portable steam-pump, so as to produce a combination of a portable steam-pump, an automatic relief-valve, and a water-cylinder, for the purpose of relieving the pressure of water, a new invention?

A. You must get that from some other expert but me, who can understand your question.

Q. 51. Then, for aught you know, your claim is that the Bailey patent is only distinguished from what has gone before by adding to or combining the hose with an ordinary steam-pump having an automatic relief-valve?

A. That is a distinction; yes, sir.

Q. 52. What are the other distinctions? (Last question repeated.)

A. That is a feature different from what I suppose you allude to.

Q. 53. Give the other features of difference?

A. I don't understand the question. I know what you are getting at. I don't know of any application attached to a water-cylinder. I don't know of any prior to mine.

58 Q. 54. Have you ever read any of the standard works upon the steam-engine?

A. I have read somewhat about steam-engines.

Q. 55. Have you ever read any of the standard mechanical works upon the steam-engine?

A. I don't know that I ever read one clear through.

Q. 56. Did you ever read any of the standard works on the steam-engine, where they treat of automatic relief-valves for the purpose of relieving the pressure of water in the cylinder?

A. I may have noticed something of the kind, but I cannot call anything to my mind particularly about that.

Q. 57. Then your idea is, as I gather it, that the novelty of your invention consists in the application of an automatic relief-valve to a steam fire-engine for the purpose of relieving the pressure in the hose?

A. A steam fire-engine or steam-pump for fire purposes.

Q. 58. And your knowledge or experience does not extend to
59 the application of an automatic relief-valve to any steam-pump used for any other purpose than the extinguishment of fire?

A. No. I don't know anything about any other purpose except the extinguishment of fire, sir.

Q. 59. You stated that one of the benefits of your invention was that it enabled a stop-cock at the nozzle of the hose to be turned off?

A. Yes, sir.

Q. 60. Do you give it as your opinion, as an expert, that that valve or any valve used in combination with a steam fire-engine, the pump and the hose would relieve the pressure in the hose by turning off the stop-cock at the nozzle?

A. I know what you are after, but you must put your question more clearly than that.

(Question repeated.)

A. Where the stop-cock is turned, and a properly constructed automatic relief-valve is attached to the engine, that stops the water
60 instantly from coming out of the nozzle. Now, there is a pressure and unless there is something there to relieve that the hose of the engine will burst, but the relief-valve being attached that takes that pressure off takes the water which is stopped from going out of the nozzle and either turns it on to the ground or into the suction, where it is used over again.

Q. 61. Is it not a fact that the turning of the stop-cock converts the water in the hose into what might be called dead water, still water?

A. I think the water is under a pressure, just the same as steam.

Q. 62. It becomes still in the hose, does it not, the water in the hose?

A. No, sir; it is not still. If the valve wasn't there, if you stood anywhere near it when it was turned off, you would get wet very quick, because the hose would burst.

Q. 63. Is it not a fact that the true operation of the valve is to enable the engine to continue pumping when the stop-cock is turned off
61 at the nozzle?

A. No, sir. There is a good many things attached to the valve beside that thing, because what is the stop-cock on the pipe for?

Q. 64. Is the construction of the valve as used by the City and County of San Francisco on its steam fire-engines similar to the construction of the Bailey valve?

A. It has the same principle and action.

Q. 65. Does the pressure operate upon the stem of the Bailey valve?

A. Well, I never saw a presssure of any valve that didn't operate upon the stem of any automatic valve of that description, spring-valve or weight-valve. There is another valve which is different.

Q. 66. The pressure operates upon the face of the Bailey valve, does it not?

A. It operates upon the face of any valve.

Q. 67. Does it operate upon the face of the valve used by the City and County of San Francisco upon its steam fire-engines, or is
62 the water conducted by pipes up to the top of a shoulder, and discharged against the top?

A. I can't say about that particular pipe unless I had the valve here that you allude to. I know what you are after. But it has the same action.

Q. 68. Don't every valve open by pressure?

A. Every valve open' by pressure.

Q. 69. What is your particular claim under your patent?

A. What I claim is the combination with the pump, cylinder, and hose of a steam fire-engine of an automatic relief-valve arranged relative thereto substantially as specified in this patent (Exhibit A).

Redirect examination by Mr. BOONE:

Q. What is the particular value of the relief-valve when applied to the cylinder of a fire-engine or to the hose?

63 A. Do you mean in its use or action?

Q. 2. Yes; what benefit is derived from it?

A. This relief-valve has two actions. One is to regulate the pressure of the hose; that is, if it is desired only to carry a hundred pounds no more water can get through the hose whenever that is set. That is one

value. That would prevent ordinary hose from being overstrained. For instance, hose that couldn't bear over a hundred pounds pressure with safety could be used and not overstrained, and without the valve the hose would be likely to get a pressure of a hundred and fifty pounds and burst it. Now, as used in connection with the stop-cocks it has the important advantage of saving property. For instance, we will suppose that there is a fire in this room; that this building is on fire, and the fire breaks out in this room. With an ordinary engine
64 and hose, without any safety-valve, they would drag the hose right up here, and the engine is stationed perhaps a thousand feet away. After they got the hose up here they send word to the engine to play. They play; and supposing they put the fire out in this particular room, they must send word to the engine to turn the water off. In the mean time the water is splashing over the room for three or four minutes, and perhaps there is fine goods here which will be destroyed by the water.

Then perhaps the fire breaks out in the adjoining room, and they want to move the hose in there. Then the water will splash all around over everything, until they get the hose directed against the fire in there.

Now, with a relief-valve on the engine and a stop-cock on the pipe, they will bring the hose up here; perhaps the engine is in action; it makes no difference whether it is or not, but the hose will be dry. The moment the fireman gets in sight of the fire he can open the stop-cock
65 and play on it. And when the fire is subdued in that particular spot he turns the stop-cock off and uses no more water and takes his hose down.

Q. What becomes of the pressure, then?

A. It is relieved by the safety-valve. You move it round just the same as a garden hose when there is a stop-cock on the garden hose.

Q. 4. Now, I will ask you: Supposing you were the inventor of the device described in this Bailey patent, and you were aware that before your invention *that* a relief-valve had been used on a water-cylinder on board of a ship, would you consider that it was a new invention to combine that relief-valve with a fire-engine and hose so as to accomplish the object which you have just stated?

A. I would have considered it a new invention.

Recross-examination by Mr. PRESTON:

Q. 1. Then, as I understand you, to obtain all these practical
66 benefits which you have just detailed from the application of the safety-valve, it would be necessary to have a stop-cock on the nozzle of the hose, would it not?

A. No; it isn't necessary to have a stop-cock unless you choose.

Q. 2. It would not be necessary?

A. Well, the valve is one thing and the stop-cock is another. They both operate in conjunction when they are both attached.

Q. 3. Won't you please answer my question?

(Q. repeated.)

A. I stated two benefits of the valve——

Q. 4. (Interrupting.) If you used a hose without any stop-cock water would be splashed all about a building just the same as it would have been prior to the application of the automatic relief-valve, until you had time to send to the engineer to stop off the water, would it not?

A. If there wasn't a stop-cock?

Q. 5. Yes.

A. Yes, sir; precisely.

67 Q. 6. Therefore, it is the application of the stop-cock which makes your invention of practical value?

A. No, sir; not altogether.

Q. 7. But it is the application of the stop-cock which enabled you to take a dry hose through a building and direct the water to a point where needed, and turn it off again?

A. Yes, sir.

Q. 8. And the stop-cock could not be used without an automatic relief-valve upon the engine?

A. No, sir.

Q. 9. Mr. BOONE. Was not the object of this relief-valve to relieve the pressure on the hose when the stop-cock was turned off at the end of the hose?

(Objected to as leading & suggestive.)

A. Do you mean when it was originally invented?

Q. 10. Yes; when it was originally invented.

(The same objection.)

A. When the valve was originally invented the stop-cock was not applied to it.

Here a continuance is taken until Tuesday, August 19th, at 2 o'clock p. m.

68 TUESDAY, *August* 19, 1879.

Present Mr. Boone, of counsel for complainant; Mr. Preston, of counsel for defendant.

Dr. CHAS. E BLAKE recalled:

Mr. BOONE. Q. 1. Doctor, have you any model of the Bailey valve that you wish to put in?

A. Yes, sir.

Q. 2. Well, is that it?

A. Yes; this is it.

Mr. BOONE. We will put that in, and have it marked Complainant's Exhibit C.

Q. 3. Take that valve, doctor, and describe its construction and application in connection with the pump, cylinder, and hose of a fire-engine.

A. The object of the valve—of the valve, or this valve?

Q. 4. This valve; yes.

A. Have not I gone over that?

Q. 5. Well, go on and describe its construction and its application to the pump and cylinder and hose of a fire-engine. First, its construction.

69 A. Well, we will suppose that this valve is attached to the steam-pump of a fire-engine.

Q. 6. How is it attached?

A. This would be attached or could be in two or three different places. It can be attached to the arm of the engine or the body, the place where the hose is attached to it; and the hose—well, in that case there would have to be an extra—this wants to be attached so there will be no escape for the water; and whenever this is attached *so there will be no escape for the water; and whenever this is attached* to a steam-pump a rate or certain number of pounds of pressure on the hose is fixed, and if there is any more than that rate calls for the balance will escape. It is a relief to the hose or pump.

Q. 7. Automatic or otherwise?

A. Automatic.

Q. 8. By the pressure?

A. By the pressure.

Q. 9. Now, what particular result is produced by attaching that to the pump-cylinder, or hose?

Mr. PRESTON. I object to the testimony, as being a repetition of the former testimony of the witness.

70 Mr. BOONE. Q. 10. Now go on.

A. It has its effect in two or three different ways, but the greatest effect is a relief to the hose. Suppose, for instance, there is any obstruction to the hose whatever whilst the engine is being played, it will relieve that pressure or obstruction to the hose and prevent it from bursting. Suppose there is a cart should go over a hose when it was playing on a fire, the action of that, by the extra pressure, would cause this valve to raise and let the water escape, and thereby prevent the pressure from bursting the hose. If anything should fall on the hose, timber, iron, or stone, or any heavy thing, while the engine was in action, that would relieve the hose, without which it would most certainly burst, if the engine was in full force; but with this relief-valve it would not burst. As a proof of that, a truck with about five or six tons of iron was driven over a hose with a plank on it and remained on the hose whilst the engine was playing, and a portion of the
71 water ceased to flow from the nozzle of the hose, and the valve opened and relieved it of the balance of the water. That was, I think, a demonstration sufficient to show that it was a relief to the hose.

Cross-examination:

Mr. PRESTON. Q. 11. This then, if it is used, requires a steam fire-engine and a hose?

A. You want a steam pump and hose or there will be no use for the valve.

Q. 12. It is simply an appliance or attachment to an engine or hose?

A. Yes, sir.

Q. 13. Not intended for a matter of ordinary traffic or commerce or sale except simply as something which you would allow to be used upon a steam-pump or applied to a steam-pump?

A. Yes, sir.

Q. 14. In what respect does it differ from any other automatic relief-valve?

A. It is about the same as others.

Mr. BOONE. 15. Did you ever see any other automatic steam-pump relief-valve other than this?

A. No, sir.

72 Q. 16. Then you do not say that positively?

A. No, sir.

Mr. PRESTON. 17. The operation of the valve, so far as the relief from the pressure of the water is concerned, the principle is the same, as you stated in your previous testimony, as that belonging to a steam-pump relief-valve—automatic relief-valves generally?

A. It is similar to other automatic steam pump valves.

Q. 18. I understood you to say it was the same as that of a steam-boiler relief-valve for the escape of steam?

A. I stated what the difference was.

Q. 19. What are the differences, doctor?

A. The difference in the construction of the valve and in the action of it.

Q. 20. It is a steam valve working in the seat?

A. Usually, yes, sir. It can operate by a spring or weight.

Q. 21. You do not mean to be understood to say that it was anything further than any automatic relief-valve for the escape of steam the pressure of which is regulated either by a weight or spring, substantially as this is constructed?

73 Mr. BOONE. We do not claim the valve any further than in this combination with a steam fire-engine.

Mr. PRESTON. You do not?

Mr. BOONE. No, sir; that is all we claim.

Mr. PRESTON. Well, that is all.

74 *John M. Stockman.*

Mr. BOONE. Q. 22. Give your age, residence, and occupation.

A. 41 years old; I reside in San Francisco, and am a pattern-maker and draughtsman.

Q. 23. Do you understand the construction of machinery?

A. To some extent.

Q. 24. I will ask you to take the Complainant's Exhibit B, and state what kind of a valve that is—what it is?

A. Well, it is an ordinary valve, so far as the seat is concerned, with a spring attached for the purpose of regulating it to a certain pressure in its action; I suppose that is it.

Q. 25. If that valve is attached to a pump-cylinder of a steam-engine to which a hose is connected also, and the pressure of the water in the cylinder should become greater than the tension of the spring, what would be the result?

Mr. PRESTON. There is no question about that here.

Mr. BOONE. Defendant's counsel admits that the valve represented by Complainant's Exhibit B is an automatic relief-valve.

75 Q. 26. I will ask you, Mr. Stockman, if you have examined any of the steam fire-engines in use in the City and County of San Francisco?

A. No, sir; I have not.

Q. 27. You do not know whether they use that valve or not, or any valve?

A. Well, I do not know of my own knowledge; not by ocular demonstration.

Continued until to-morrow, 20th instant, at 2 o'clock p. m.

76 *F. E. R. Whitney.*

WEDNESDAY, *August* 20, '79.

Examination-in-chief of F. E. R. WHITNEY:

M. BOONE. Q. Please state your name, age, place of residence, and occupation.

A. F. E. R. Whitney; residence, 634 Sutter street; age, 58; I am superintendent of the safe deposit vaults.

Q. 2. How long have you been in this city?

A. Thirty years.

Q. 3. Have you ever had anything to do with the fire department of this city?

A. I organized the first fire department here, the volunteer and also this paid department.

Q. 4. Do you understand the construction and operation of the fire-engines used by this city?

A. Yes, sir.

Q. 5. Do you know whether the city uses on their fire-engines a relief-valve for relieving the pressure on the hose or not?

77 A. They have got something of that kind, yes; sir.

Q. 6. What kind of a valve is it? Is it automatic?

A. Automatic. Self-acting.

Q. 7. How is that valve applied, and what is its use? What object do you obtain from its use?

A. The advantage is that at a fire, the nozzle being shut off or a team, a loaded team, going over it, or anything of that kind, it prevents the hose from bursting, and prevents the destruction of goods in the building, and everything of that character.

Q. 8. Is this valve used in connection with the water-chamber of the pump and the hose?

A. Yes, sir; between them; I presume these do. It is where we always made our attachment.

Q. 9. As a fireman, Mr. Whitney, I would ask you what your opinion of the value of that valve is in connection with the fire department?

A. That would be an impossibility for any man to say. With an attachment of that kind on an engine, in a hardware store, in a silk
78 house, or any building where the material could be injured by water, the saving by such a valve and stop-cock of the property, it cannot be estimated, for oftentimes water does as much damage and oftentimes more than the fire itself, oftentimes.

Q. 10. Then, if I understand you, the value of such a device would be almost beyond computation to the city?

A. Yes, sir.

Q. 11. In your knowledge, do you know instances where these valves used in this way have saved property?

A. Oh, yes; quite a number of instances where we have forced the doors and have crawled in, and got at the seat of the fire, and got a simple dash and hauled out?

Q. 12. Did the simple dash put the fire out?

A. Well, it put out the body of the fire, so that it could be controlled by what we have generally used as a Johnson pump where the steam is very small, instead of using the engine for another dash, lessening the quantity of water.

79 Q. 12. If there were no relief-valve on the engine, could you have used that Johnson pump to do this work?

A. Oh! yes; we could have done that. We could have done that, but the quantity of water that would have followed without that valve and stop-cock would have caused damage that you could not account for. There is no way of getting at it. For instance, let me tell you: An engine going to a fire with 75 or 100 pounds of steam, say, and immediately gets into operation, and suppose that the body of the house, whatever it might be, is all afire, we find, and break open the doors and going to look at it we reach that fire within a very few feet, and we give it that dash and that knocks the heft—knocks the heft of the fire; and we immediately shut off for the prevention of damage by water, and not by fire, because if we can get that portion of the fire down we can walk to it and oftentimes manage it, as I tell you, by this simple

pump they carry, which I introduced in the department when I
80 came east, or parts of water. Do I make it clear?

Q. 13. Perfectly clear; yes. Prior to the adoption of this relief-valve, what was the result when the water was shut off at the nozzle?

A. Previous to the use of this?

Q. 14. Yes; to the use of this.

A. We never had any stop-cock at the pipe.

Q. 15. Why didn't they use them?

A. For the very reason it would have injured the machinery; it would have bursted the hose, and it would have taken time to replace the lines of hose; that would have cracked up to a mere nothing.

Cross-examination by Mr. PRESTON:

Q. 1. Do you understand the construction of the Bailey valve?

A. No, sir.

Q. 2. Don't know anything about it?

A. No, sir.

Q. 3. Do you know anything about the construction of any of the valves in use in the fire department of this city to-day?

81 A. I only know that they are self-acting; that they are automatic.

Q. 4. You know that there is some kind of an automatic valve?

A. Yes, sir.

Q. 5. And that its operation is to permit the use of a stop-cock at the nozzle of the hose?

A. Well, that does not necessarily follow; it does not necessarily follow that any relief-valve needs a stop-cock.

Q. 6. My question was that the use of that valve permitted the use of a stop-cock at the nozzle of the hose.

A. Oh! certainly, certainly.

Q. 7. Now, all these results that you have spoken of with reference to the extinguishment of fires without damage to the goods contained in the building, by water, proceeds from the use of the stop-cock in combination with the hose and valve, does it not?

A. Yes, sir.

Q. 8. The stop-cock would form one of the elements of the combination for that use, would it not?

A. Yes, sir; but that alone——

82 Q. 9. I understand. I understand that without the stop-cock you couldn't stop the water in the building; in other words you wouldn't have the water in the hose under the immediate control of the pipe-man?

A. No; not so broad; not so broad; no, sir.

Q. 10. You would have to communicate with the engine?

A. Yes, sir; we would be obliged to communicate with the engine.

Q. 11. You would have to communicate with the engine if there was no valve at all; if there was no valve and you wanted to stop the water?

A. Why, certainly; certainly, the ordinary way.

Q. 12. But the valve of the automatic relief-valve—of the application of the automatic relief-valve to a steam fire-engine proceeds principally, if not solely, from the fact that it permits or enables the pipe-man to use a stop-cock at the nozzle of the hose?

A. Certainly.

Q. 13. And without the stop-cock, simply with the hose and the

steam fire-engine and the automatic relief-valve, this result of
83 which you have spoken would not be reached?

A. Well, that you ought not to have asked, my good friend, for this reason: Oftentimes we could take our hose and roll it right up, and the automatic valve would receive the pressure and would give away and relieve it from the pipe.

Q. 14. Could that be done without the discharge of a considerable amount of water over which you had no control?

A. There would be a discharge of water, but we could accomplish the result. We could accomplish the result by laying it over, perhaps three layers, and getting on to it ourselves, then the relief would come from the engine.

Q. 15. While you were doing that the water would be discharging through it, would it not, while you were turning that hose round?

A. Well, until we accomplish that, until we accomplish the breaking, as we call it, breaking the hose.

Q. 16. Let me ask you another question; I don't know anything about it; the hose of a steam fire-engine, with a full head of water upon it, is not pliable, is it?

84 A. No, according to the elevation.

Q. 17. It requires considerable force to turn, does it not?

A. Yes, sir.

Q. 18. Requires the exercise of a great deal of physical force?

A. Number of pounds of steam to force it to that position.

Q. 19. What I mean is, that if a hose is in a building with a full head of water on it takes considerable—would require considerable physical strength to take these turns in it which you speak of, would it not?

A. The very moment that you commence taking that turn that very moment the water acts in the valve.

Q. 20. Yes; I understand that.

A. And a relief at once comes, but not with the protection that it would.

Q. 21. In other words, you would have to overcome the amount of pressure upon the hose by physical force before you can use the pressure upon the relief-valve?

A. That is correct, sir; you have just stated it exactly.

Q. 22. Then it would require a good deal of strength at times
85 to perform this operation you speak of, of curling up the hose to stop it?

A. When I said curl I mean to break it down from the heel of the pipe. Take the heel of the pipe and break it right over in that way. The two men that are on the pipe can do that.

Q. 23. There was another question that was asked you by Mr. Boone as to prior to the introduction of this valve, and you went on and made an answer. Do I understand your answer to mean prior to the introduction of the Bailey valve, so called, in this suit, or prior to the introduction of some automatic relief valve?

A. Well, now, I don't know anything about your suit.

Q. 24. I understand that.

A. I don't know. What I was going to get at was—I don't know, and that is where I am probably ignorant about the Bailey valve and the doctor's (?) valve and some other valve, or any other valve. I never have seen a valve that I have heard called the Bailey valve; so there is where I am perhaps ignorant.

Q. 25. What I wanted to get at was this: Mr. Boone asked you the question as to prior to the adoption of this valve. Now the valve

86 in question here is properly called the Bailey valve, being the valve which Doctor Blake has an interest in. You went on and made answer which might seem to imply, perhaps, that you alluded to the adoption of Dr. Blake's or the Bailey valve. What I was going to ask you was, whether that answer didn't mean simply to refer to the application of an automatic steam relief-valve—to the mere operation—without referring to this particular valve in suit here?

Mr. BOONE. My question referred to the application of any relief-valve, independent of any particular valve.

A. I answered that question in this way: Having tested the Blake valve—I don't know anything about any other valve you speak of—but having tested that and Prunty valve and the Ackerson valve—having tested them all and the similarity being with them all—I speak knowing of the action of those valves.

Mr. PRESTON. Q. 26. Of any automatic relief-valve?

A. Yes, sir.

Q. 27. Which will produce this result?

A. Yes, sir.

87 Q. 28. Then you didn't mean to apply yourself solely to this particular valve in suit?

A. By no means.

Q. 29. Have you any experience or knowledge, Mr. Whitney, concerning steam-pumps used on steamships or steamboats?

A. No; they are one and the same thing. I have no knowledge of these various steam-pumps; but a pump is a pump, all the world over.

Q. 30. Did you ever have your attention called to an automatic relief-valve attached to a steam-pump of a steamboat?

A. For what purpose?

Q. 31. For the purpose of relieving the pressure.

A. Steam?

Q. 32. No, sir; water.

A. No; I think not; no. I am quite positive not.

Q. 33. You never was employed in connection with anything of that kind?

A. No, sir; I am not a seafaring man, and only a very little on the sea.

Q. 34. You speak simply from an ordinary knowledge?

A. That I couldn't do.

88 Q. 35. What was the earliest date, Mr. Whitney, you ever knew an automatic relief-valve to be used in steam fire-engines?

A. 1867 or 1868. I was chief engineer both of those years. I don't remember.

Q. 36. Your knowledge don't extend any further back than that?

A. No, sir; not in our department.

Q. 37. Do you with reference to engines in any other department?

A. Yes, sir; but never saw them to work.

Q. 38. You say you did know—if I understand you correctly—you say you did know of the application of an automatic relief-valve to steam fire-engines in other departments prior to 1867 or 1868?

A. I learned from the fire commissioners in New York——.

Mr. BOONE. You need not state what you learned.

A. Then I can't say anything. That is the only knowledge I have. I didn't know anything.

Mr. BOONE. I object to that as hearsay evidence.

Mr. PRESTON. Q. 39. Have you had any conversation or com-

89 munication with the gentlemen in charge or representing the department of any other cities besides this concerning steam fire-engines or fire-department matters?

A. Very near all of them.

Q. 40. Prior to 1867 or 1868?

A. Well, about that time I went East.

Q. 41. Did you have any conversation with any of the gentlemen officially connected with the other departments, touching the application of an automatic relief valve to a steam fire-engine?

A. I was shown——

Mr. BOONE. I object to the conversation.

Mr. PRESTON. The answer to that would be yes or no.

A. I would have to say no.

Q. 42. Did you acquire any information touching the application of an automatic relief-valve to a steam fire-engine?

A. No.

Q. 43. Did you see any?

A. I asked and they said——

Mr. BOONE. I object to what they said as hearsay evidence.

A. I was shown what they said were cut-off or automatic valves shown to me by the fire commissioners of New York.

90 Q. 44. When was that?

A. I think it was the latter part of 1867.

Q. 45. That was shown to you by the fire commissioners of the city of New York?

A. Of New York.

Q. 46. When you visited that city?

A. Yes, sir.

Q. 47. Specially upon fire department matters?

A. Well, yes; of course I made my visit to look into that end.

Q. 48. You were the chief engineer of this department, were you, at that time?

A. Yes, sir.

Q. And in your communication with the authorities connected with the fire department of New York City at that time they showed you an engine?

A. No; no engine.

Q. 50. They showed you the cut-off or the automatic relief-valve?

A. They showed me quite a number of things that they had discarded, that they considered useless or of no account.

Q. 51. Did they show you anything which was claimed to be an automatic relief-valve for application to a steam fire-engine?

A. Yes, sir; these that I speak of they claimed for that purpose.

91 Q. 52. If you were to be shown a steam pump used ordinarily for any purpose on a steamship and which was fitted to be used as a fire-engine when necessary, and such a pump had an automatic relief-valve attached, would that not be equivalent in effect and purpose to the operation of these automatic relief-valves upon the engines in the department?

A. Why, an automatic valve, no matter where it is placed or in what kind of a machine, is all one and the same thing.

Redirect examination:

Mr. BOONE. Q. 1. Would such an application in your opinion be the equivalent of the use of that valve on portable fire-engines, such as are used for putting out fires in cities?

A. How is that?

Q. 2. Whether the machine thus constructed would be the equivalent of a portable fire-engine which is used in putting out fires in cities?

A. And I ask whether the pump which he speaks of is a stationary pump on board of a ship with a relief-valve attached—with the
92 relief-valve attached and the hose and stop-cock.

Q. 3. Yes.

A. Why one and the same thing, whether it be on land or sea.

Q. 4. What do you mean by one and the same thing?

A. Why I mean to say——

Q. 5. That the result obtained from the relief-valve would be the same.

A. Of course.

Q. 6. And wouldn't the machine be the same, the entire machine as a whole be the same, as a portable steam fire-engine, as much as the other used in the cities?

A. Why you attach for fire purposes cut-offs from the main engine for fire purposes—that becomes a fire-engine; & it ceases to become a part and parcel of the engine to work with the machinery of the ship. You make it a fire-engine the very moment that you change this cut-off. It is concentrated then and there for fire purposes & not for carrying on the machinery of the ship. The applications are made separate on every steamship, as I understand that, although not precisely in that way, but I know that for fire purposes they concentrate their force for that purpose.

Complainant rests.

93 *Testimony for defendant.*

SAN FRANCISCO, CAL., *Sept.* 24, 1879.

CHARLES E. BLAKE
vs.
CITY AND COUNTY OF SAN FRANCISCO ET AL.

Deposition of James Stoddard.

J. STODDARD, sworn.

By Mr. PRESTON:

Q. 1. State your name, age, and occupation.

A. James Stoddard; 44 years old last Jan'ry; assistant superintendent of steam-engines of the San Francisco fire dep't.

Q. 2. Have you had any experience in mechanics?

A. I am a machinist by trade.

Q. 3. For how many years past?

A. I have worked 21 years at machine-work.

Q. 4. Are you familiar with the construction and operation of an automatic relief-valve?

A. Yes, sir.

Q. 5. Do you know the construction and mechanism employed
94 in steam-fire-engines, in use by the San Francisco fire department?

A. Yes, sir.

Q. 6. You became familiar with them in your occupation as sup't of the San F'co fire dep't.

A. Yes, sir; & also with steamers.

Q. 7. Do you know whether or no automatic relief-valves are in use by the steam fire-engines of the department?

A. They use the Empire relief-valve.

Q. 8. On how many engines?

A. All the engines in the service—eleven.

Q. 9. Examine this valve and tell me whether that is the valve used by the San Francisco fire department?

A. Yes, sir; that is the valve.

(Marked "Defendant' Exhibit A.")

Q. 10. Can you describe the arrangement of that valve with respect to the engine and hose?

A. Yes, sir.

Q. 11. Where is it placed on the engine?

A. This valve is put on the discharge side of the pump, connected with the discharge side of the pump, for the purpose of relieving the pressure of the water.

Q. 12. Does it connect with the hose?

A. Well, the water that this acts on is discharged through the hose.

95 Q. 13. Is this connected with the hose-pipe itself?

A. No, sir; it is connected with the pump of the engine.

Q. 14. Connected directly with the pump of the engine?

A. Yes, sir.

Q. 15. The hose of the engine is connected directly with the pump also?

A. Well, it is connected with the discharge of the pump.

Q. 16. Have you ever seen or known these automatic relief-valves to be applied to feed-pumps in steamships?

Mr. BOONE. I object to that as immaterial.

A. I do not know, sir. I am not familiar with pumps on board ships at all.

Mr. PRESTON. We offer in evidence a certified copy of the original patent issued to Thomas H. Bailey, Troy, New York, dated the 9th of February, 1864.

(Marked "Defendant's Exhibit B.")

Q. 17. Will you examine the drawings and specifications?

A. Yes, sir.

Mr. BOONE. For what purposes do you introduce this original patent?

96 Mr. PRESTON. I offer it for two purposes, one is for the purpose of obtaining the testimony of the witness with relation to such questions as we may be advised, and also for the purpose of arriving at a proper construction of the reissued patent.

Q. 18. Have you examined it?

A. I understand this drawing. Yes.

Q. 19. I now show you Plaintiff's Exhibit C, being the model of the so-called Bailey valve. Taking the Bailey valve as it is shown in the patent, would you be able to insert the pin B in the hole made to receive it without reference to the adjustment of the cap "D"?

A. I don't think I could.

Q. 20. Then the application of the means employed to hold down the valve permanently would depend upon the cap being adjusted to the hole in the valve-stem?

A. Yes, sir.

Mr. BOONE. I object to that as leading.

Mr. PRESTON. If this cap D is so set and adjusted to accommodate a certain amount of pressure, say 100 pounds, it would have to be done by applying a regular gauge to test the adjustment, on being set?

A. Yes, sir.

Q. 22. Now, if the cap be moved out of its adjustment, what
97 would be the effect of resetting it?

A. It could have no adjustment on the water at all.

Q. 23. Would you have to reset it?

A. Yes, sir.

Q. 24. Would that be troublesome or difficult under ordinary circumstances? Supposing the engine was at work?

A. You could put that pin in there and screw the whole down.

Q. 25. The moment you adjust the hole there and key it down, does not it cease to be an automatic valve?

A. It would if you bottom it.

Q. 26. How if you screw it down full length?

A. It would. If you destroy the spring then it ceases to be an automatic valve. By screwing this down, of course you draw this together and then it ceases to be an automatic valve, in my opinion.

Q. 27. When this is screwed down to the pin here, the cap being held rigidly in place, could the stem of the valve have any play whatever?

A. Not with this pin through here.

Q. 28. Not with the pin in there?

A. No, sir.

98 Q. 29. Now, Mr. Stoddard, in the Bailey valve, Exhibit B, to insert the pin D in the stem so as to hold down the valve, what is the effect upon the adjustment of the spring?

A. When the pin is inserted it destroys the effect of the spring altogether.

Q. 30. Then does the valve cease to be an automatic valve?

A. Yes.

Q. 31. Now, suppose this valve was set to a certain weight & you wish to insert the pin D through the pin-hole in the valve, you are obliged, you have stated, to turn the cap so as to insert that pin?

A. Yes, sir.

Q. 32. Does not the turning of the cap destroy the adjustment of the pin?

A. Yes, sir.

Q. 33. Then they are not independent of each other?

A. No, sir.

Q. 34. You cannot key this stem by means of the screw-cap without destroying the adjustment of your spring, can you?

A. No, sir.

Q. 35. In the Bailey valve?

A. Yes, sir.

Q. 36. Now, how is it in the Orr valve in that particular?

99 A. Say you want to put it at 110 or 120 pounds on this, you do it by running this spindle up.

Q. 37. That acts independent of the adjustment?

A. Yes, sir.

Q. 38. It don't destroy that?

A. No, sir.

Q. 39. The adjustment is made by this (showing)?

A. Yes, sir.

Q. 40. And the two are independent?

A. Yes, sir.

Q. 41. What effect does that adjustment by means of this screw have upon the valve with reference to the automatic action of the valve; does it destroy the automatic action of the valve?

A. No, sir.

Q. 42. The valve always remains automatic?

A. Yes, sir.

Q. 43. Then do you find any point of difference between the Bailey & the Orr valves?

A. In respect to the working of it?

Q. 44. Yes.

A. I cannot perceive any.

Q. 45. This we have just been talking about?

A. With reference to the valves when they are in working order,

100 the difference is with respect to this keyhole & stem.

Q. 46. Then the difference you find between the Orr valve & the Bailey valve is with reference to this combination of the valve, the stem, the spring, and the adjustable cap & the keyhole?

A. Yes, sir.

Q. 47. In that respect the Orr valve & the Bailey valve are different?

A. Yes, sir; in that respect.

Q. 48. The combination you find in the Bailey valve, do you find it in the Orr valve?

A. No, sir.

Cross-examination:

Mr. BOONE. Q. 49. Mr. Stoddard, how long have you resided in San Francisco?

A. Twenty-one years last April.

Q. 50. How long have you been connected with the San Francisco fire department?

A. I believe I was appointed in the San Francisco fire dep't the 4th of April, 1870.

Q. 51. How long have the automatic relief-valves been in use on the engines in San Francisco?

A. Well; I could not say positively, but I think for the last 4 or 5 years.

I could not state exactly?

101 Q. 52. Are these automatic relief-valves used on all the engines in use in the city?

A. All that are in the service.

Q. 53. How many engines are there in the city?

A. There are 11 engines in the service and 5 relief engines.

Q. 54. What did you state was the object of this valve?

A. To relieve the pressure of the water in the pump. It is for the purpose of adjusting the pressure of the water in the pump.

Q. 55. What effect has it on the hose?

A. Well, in the San Francisco fire dep't they use what they call shut-off nozzles, & this valve is for the purpose of letting the water escape from the discharge back into the suction.

Q. 56. Could a shut-off nozzle be used if there was no automatic relief-valve applied to the engine or hose?

A. Not very well.

Q. 57. Is it considered by the fire dep't in this city that any great advantage results from the use of the shut-off nozzle?

Mr. PRESTON. We object to that as immaterial.

A. Yes, sir.

Q. 58. Please read the Bailey patent and state what is the ob-
102 ject of the pin-hole and pin.

A. The object of this pin-hole is to make this valve a fixture; to throw the screw out of operation. When the pin is put through the hole & that is screwed down it becomes a fixture.

Q. 59. Under what circumstances would that pin be necessary?

A. Well, it might be in case that they wanted to work a greater pressure than the spring would allow. For instance, that spring is adjusted to 100 lbs., & they want to use 150 pounds, they might use that pin for that purpose. That is the only use I see for it.

Q. 60. How is it in testing engines; could you test an engine with an automatic relief-valve at work on it?

A. Test the engine itself or the hose?

Q. 61. Either. Would not it be necessary to throw that relief-valve out of use so as to get a full pressure of the engine?

A. Yes; it would.

Q. 62. Then the pin and the pin-hole serve to throw the valve out of use in testing the engines?

A. Yes, sir.

Q. 63. In actual practice the pin & hole are left out?

A. Yes, sir.

103 Q. 64. The pin would be left out of the pin-hole?

A. Yes, sir.

Q. 65. In the Bailey valve the adjustment is made by screwing down the cap so as to condense the spring & give greater pressure?

A. Yes, sir.

Q. 66. Now, in the Orr valve how is the adjustment made?

A. By this screw here; tightening these two parts together on the spring.

Q. 67. What is the object of a spindle & hand-wheel on the Orr valve which is connected with the valve proper?

A. Well, that would be used, you might say, in a secondary adjustment, provided you had this set at 100 lbs., & you wanted more pressure than that on the hose you could adjust it without altering this (showing).

Q. 68. Then, by means of this spindle & hand-wheel could you not set the valve down with such pressure that it would be inoperative?

A. Yes, sir.

Q. 69. Then the spindle & hand-wheel serve the same purpose as the pin & pin-hole in the Bailey valve?

104 A. Precisely.

Q. 70. Do you find any difference in the practical working of the two valves?

A. One is intended for the same purpose as the other, excepting this pin-hole?

Q. 71. That is as to the construction, but I mean the practical working.

A. It is just the same. I do not see any difference in them whatever.

Q. 72. They both serve to relieve the pressure on the hose?

A. Yes, sir.

Q. 73. And they have the same means of adjustment except the difference in the mechanical method of applying it?

A. Yes, sir.

Mr. PRESTON. Are you familiar with any other valves?

A. No, sir.

Q. 75. Have you ever seen any other relief-valves?

A. I have, but I have not examined them. This is the only valve that I know anything about with reference to fire-engines.

105 GEORGE PARDY sworn.

Mr. PRESTON:

Q. 1. Give your name, age, & occupation.

A. George Pardy; 38 years old; occupation, engineer & patent expert.

Q. 2. Will you examine these patents, Defendants' Exhibit B and Plaintiff's Exhibit A?

A. I have examined these.

Q. 3. Are you familiar with the inventions therein described?

A. Yes, sir.

Q. 4. Is this Plaintiff's Exhibit B, C (?) a model of the valve described in the patent issued to Thomas H. Bailey?

A. Yes, sir; it is the same thing.

Q. 5. Have you examined the reissued patent to the plaintiff in this case, Dr. Blake?

A. Yes; I have examined a good many of them.

Q. 6. What does that cover?

A. This first claim I should understand is for some particular arrangement of an automatic relief-valve with reference to the hose of a fire-engine. It is a special arrangement. I should not interpret it as a claim covering any arrangement of such automatic relief-
106 valve. The claim states, "the combination of a pump-cylinder & hose with a fire-engine, with an automatic relief-valve arranged relatively thereto, substantially as specified." To get a thorough meaning of that claim you would have to refer to the specifications to find out how this arrangement was.

Q. 7. What arrangements do you find in the specifications?

A. The arrangement shows a pipe running up from the pump-cylinder vertically, upon which there is stop-cock H. On this pipe there are two hose-nozzles, upon which the hose may be attached leading from the vertical pipe. There is another pipe which does not seem to be marked on this, and it is upon this second pipe that leads at right angles with the vertical pipe that the automatic relief-valve is placed. That is the arrangement substantially as described, in my opinion. Any other arrangement differing from that would scarcely be within the scope of this claim. That is the view I should take of it. The reason I take that view of it is because relief-valves have been
107 attached to such pump-cylinders before.

Mr. BOONE. I object to it. No notice has been given in any cases in anticipation.

Mr. PRESTON. It is to show the state of the art & give a better understanding of the construction of the patent.

Q. 8. Have you examined the state of the art as it existed at the time of the issuance of this patent?

A. Well, I am personally familiar with the state of the art from my own practice, & also I have read a great deal upon the subject.

Q. 9. Please state what it was.

A. Well, in my profession it is a common thing to apply relief-valves on pump-cylinders. Sometimes these pumps are used for feed-pumps, for feeding boilers on board steamships. There are also steam feed-pumps, & these steam feed-pumps are, in the majority of

cases, fitted with nozzles for the attachment of fire-hose, so that the feed-pump, in cases of emergency, may be used as steam fire-engines. On nearly all these feed-pumps that are used for feeding boilers and for steam fire-engines also there is necessity for applying an au-
108 tomatic relief-valve; for this reason, in feeding boilers when there are more than one boiler, it sometimes occurs that the engineer at a boiler will have to turn off the water suddenly by a stop-cock from feeding the boiler—from feeding one of the boilers. When he does that it creates a back pressure on the pump cylinder; and to avoid any injurious pressure on the cylinder, these automatic relief-valves are applied. In the use of those pumps for fire purposes the automatic relief-valve will act exactly as it does in this Bailey patent. The two things are substantially alike. There was a steam fire-engine manufactured by Merriweather & Son, in England, for use upon the river Tyne, in England. This steam fire-engine was placed upon a tug-boat & was intended to be used along the wharves and along the shipping. This steam fire-engine had an automatic relief-valve in connection with an air-chamber that was put on the pump. That was in the year 1861, I believe. A full account of that is published.

109 Mr. BOONE. Q. 10. I ask the witness if he ever saw that steam-engine.

A. I read about it.

Q. 11. Did you ever see it?

A. No; I never saw it.

Mr. BOONE. Then I object to the testimony.

Mr. PRESTON. State the source of your information concerning the Merriweather fire-engine.

A. It is from the Practical Mechanics' Magazine.

Mr. BOONE. I object to it. It is secondary evidence.

Mr. PRESTON. We offer, then, vol. 502 British Patent Reports, 1846, published in 1856 by George Edward Eyre & William Spotteswoode, the said patent being for a hydraulic crane, No. 11319.

Also the Practical Mechanics' Journal, vol. 7, new series, pages 155 & 156, published by Longman, Green & Longman, London, England, and Glasgow, Scotland, Sept. 1st, 1862, together with the drawings.

Mr. BOONE. It is objected to on the ground that no notice has been given of the introduction of such testimony.

Mr. PRESTON. It is for the purpose of proving the state of the art, to assist and guide the court in arriving at the facts of this case,
110 & also to anticipate.

Q. 13. Have you examined the valves, Complainant's Exhibit B & Defendants' Exhibit A.

A. Yes, sir.

Q. 14. Have you familiarized yourself with their mechanical construction?

A. Yes.

Q. 15. Will you state, if you please, the differences, if any there are, in the construction of the two valves & in their operation?

A. Both valves are used for relief-valves. The construction of the Bailey valve, Exhibit B, is different to the construction of the Orr valve, Exhibit A, in some very important particulars. One difference is, that the valve-stem & valve-cap operated in the Orr valve, Exhibit A, without interfering with the load on the valve, brought about by the spring of the valve. That is not the case with the Bailey valve. The Bailey valve cannot be used as a stop-cock without destroying the adjustment of the spring & the load. That is a very important differ-

erence. The two valves are not alike as far as their combination of parts is concerned.

111 Cross-examination:

Mr. BOONE. Q. 16. Both of these valves are automatic in their operation, are not they?

A. Both automatic in their operation.

Q. 17. What is the use of the spindle & the hand-wheel in the Orr valve?

A. The hand-wheel is to operate the valve as a stop-cock.

Q. 18. It is used for the purpose of screwing the valve down close upon its seat?

A. Yes, sir.

Q. 19. When it is screwed down close upon its seat that throws the spring out of action?

A. Not necessarily.

Q. 20. What is the object of the spring?

A. The object of the spring is to provide for a load on the seat of this valve, to load the valve.

Q. 21. Then, when the water-pressure increases above the strength of the spring the valve lifts & the water escapes, does it?

A. Yes, sir.

Q. 22. Then, in order to operate the valve, the valve must be lifted from its seat, must not it, in order to let the water escape?

A. Yes, sir.

A. Yes, sir.

Q. 23. Now, if that valve be screwed down by means of the spindle and hand-wheel, so that it cannot lift, what action can the spring have?

112 A. That never occurs.

Q. 24. But I ask if it were turned down so that it could not lift what action does the spring have; would that not throw the spring out of action?

A. There would be no spring then. That is a thing that never occurs, because the spring—you would have to close the spring entirely & make it solid before that could occur. The spring is always in action until it is closed up in one solid mass.

Q. 25. I ask you if the hand-wheel be turned so as to set that valve down so it could not lift at all?

A. It won't lift.

Q. 26. Then it is of no use; really is out of action?

A. Yes, sir.

Q. 27. Then, would not it be an equivalent to pin the & pin-hole in the Bailey valve, in that condition?

A. It would be the same thing.

Q. 28. You stated in your direct examination that your knowledge of these valves was derived from personal contact or personal experience in the business?

A. Yes, sir.

113 Q. 29. Prior to the date of Bailey's patent, which is Feb. 9th, 1864, had you any practical experience in valves?

A. I had for several years before that.

Q. 30. How old are you now?

A. 38. I was in business in 1858. I made lots of drawings for these things prior to that.

Q. 31. Then, you mean to say that at the time you was 18 years old you was familiar with these valves & their workings?

A. About that time I was familiar with them, but not thoroughly so. I learned a great deal after that.

Q. 32. Have you any practical experience in the operations of fire-engines, or relief-valves on fire-engines?

A. Only so far as fire-engines are ordinary pumps.

Q. 33. If the Bailey valve and the Orr valve were applied in the same way in connection with a steam fire-engine & hose & both set to operate under the same pressure, would there be any difference in the effect on the hose or cylinder of the engine?

A. No difference whatever that I can see; both act alike.

114 Mr. PRESTON. They would act the same as any other automatic valve?

A. All alike. A common safety-valve of a boiler would act the same way.

Defendant here presents a written statement copied from the books referred to in Exhibit C, which copy complainant's counsel admits is a true copy of the matters therein stated.

(Marked "Defendants' Exhibit C."

George Pardy, upon reading his deposition, desires to make the following corrections:

Wherever in my testimony I used the term "relief-valves" I had reference to automatic relief valves.

Continued until Saturday, October 4th, at ten o'clock a. m.

115 *Wm. Deacon.*

SATURDAY, *October* 4, 1879.

Present, Mr. Boone, of counsel for complainant; Mr. Preston, of counsel for defendant.

Examination-in-chief of WILLIAM DEACON by Mr. PRESTON:

Q. 1. State your name, age, & occupation.

A. Name, William Deacon; age, forty-six years; occupation, machinist.

Q. 2. Will you examine what we call the Bailey patent, being Defendants' Exhibit B, & also the reissue of that patent to Charles E. Blake, which is Complainant's Exhibit A? You are familiar with the contents of those letters patent, are you?

A. No, sir; I have never seen it before.

Q. 3. Will you please examine the drawings, specifications, & claims in that patent.

A. (Witness examines Complainant's Exhibit A.)

Q. Have you aquainted yourself with them?

A. I think so, sir.

116 Q. 5. Will you now state if you have examined the models introduced by the complainant & the defendant, & if you are familiar with the construction of the two valves?

A. I don't know anything about this (Defendants' Exhibit A.) I have never seen it apart.

Q. 6. Are you familiar with the use of automatic relief-valves upon steam pumps?

A. Yes, sir.

Q. 7. Are such things common in your profession?

A. They are in steam-pumps; yes, sir.

Mr. BOONE. For what purpose do you propose to introduce this testimony?

Mr. PRESTON. To prove the state of the art.

Q. 8. How long have you known of their use?

A. I think it was the last part of 1863. I repaired one on a steamship that I was in charge of.

Q. 9. Were they common at that time?

A. I couldn't tell whether they was common. I could only speak for my own ship.

Q. 10. Do such automatic relief-valves as are commonly used operate on substantially the same principle as the Bailey valve?

A. Just the same as that, exactly.

117 Q. 11. Were those valves used on the discharge-pipes of the pumps?

A. On the discharge-pipes of the pumps, exclusively.

Q. 12. Would the operation be any different from Bailey's application?

A. The only difference that I can see in the whole business is, there is a hole in the cylinder of the Bailey valve; otherwise it is the same in all respects. The others were left open instead of there being a small hole there.

Cross-examination by Mr. BOONE:

Q. 1. Mr. Deacon, how long have you resided in this city?

A. Nearly fourteen years, sir. I came here in December, 1865.

Q. 2. Where did you reside previous to coming to San Francisco?

A. My home is in Fishkill, N. Y. I was in the United States service for some time before I came here.

Q. 3. How long?

A. Two years.

Q. 4. Where were you stationed?

A. Stationed off Wilmington.

Q. 5. In what capacity were you engaged in the United States service?

118 A. Second assistant engineer, in charge of a vessel.

Q. 6. What vessel?

A. I was in charge of the Clematis; at that time a steam blockader.

Q. 7. When did you take commission on board of that vessel?

A. It was in 1863; I can't tell you the exact date. That was the vessel that I first went on. I was on a number afterwards.

Q. 8. What one did you go on after that?

A. A captured blockade-runner converted into a blockader, called the Lillian.

Q. 9. How long were you on her?

A. About four months. I was on her till she was laid up—went out of commission.

Q. 10. About what time did you go aboard that vessel?

A. She was fitted out as a blockader when I was transferred to her.

Q. 11. About what time was it that you were transferred to her?

119 A. It must have been about the first part of 1866. I know it was, sir; she was laid up in Washington, in March of that year.

Q. 12. In what capacity were you engaged on board of that vessel?

A. I was second assistant engineer, but not in charge. There was one senior to me that was in charge of the vessel.

Q. 13. How long did you remain on board of her?

A. I think from two to three months.

Q. 14. Then what vessel were you transferred to?

A. Transferred from the New York navy-yard to the ironclad "Miantonomah."

Q. 15. How long did you remain on board the "Miantonomah?"

A. I think I must have been on her about 4 months; I am not positive. I got my discharge from her, from Chief-Engineer King.

Q. 16. Then where were you transferred to?

A. I transferred myself out to this coast.

Q. 17. How long, altogether, were you in the service?

A. About two years, sir.

Q. 18. What is your position in the city, Mr. Deacon?

A. I have a machine-shop of my own.

120 Q. 19. What is the name of it?

A. Main street Iron Works.

Q. 20. Do you know anything about relief-valves for steam fire-engines?

A. Never examined them. I have seen them just in such shape as this is, referring to Defendants' Exhibit A.

Q. 21. You state that you have seen a relief-valve on a steam-pump?

A. On the discharge.

Q. 22. Do you know whose invention it was; whose patent?

A. No, sir; I do not. I don't think it was patented. It was on an English vessel. It was on the steamer Lillian, that I was speaking of. She was built in Clyde.

Q. 23. Can you describe the construction of that valve?

A. Yes, sir; I can by that one there, (referring to Complainant's Exhibit C).

Q. 24. Do you know when that relief-valve was placed upon that steam-pump?

A. It most certainly was when the ship was built, I suppose.

Q. 25. Do you know when it was?

121 A. No, sir; nor I don't know when the ship was built?

Q. 26. You don't know whether that valve was patented or not, do you?

A. No, sir; I don't know. There was no patent mark on it, or I should have noticed it. It was just a simple check-valve.

Q. 27. Did you ever see that valve taken apart—the one on the steamer Lillian?

A. Yes, sir; I took it apart myself.

Q. 28. What for?

A. Something got under the valve & sprung the stem a little, and we had to repair it.

Q. 29. Do you know the exact date when you first saw that valve on that steam-pump?

A. I can't give you the exact date, but I can come within a month of it. The valve, by the way, was not on the steam-pump. I didn't say it was. I said it was on the discharge from the steam-pump.

Q. 30. Well, give us within a month of the date.

122 A. I think it must have been in the latter part of January, 1864, that I had the pleasure of overhauling it, because the vessel was laid up in Washington the first of March, and I was transferred then to the Miantonomah. The vessel was laid up in Norfolk at the time I was transferred to her.

Q. 31. In what part of the vessel was the steam-pump located?

A. It was in the hold. It was only a single-deck vessel. She was built for a blockade-runner.

Q. 32. What was the object of this relief-valve?

A. I suppose to keep the pipe from bursting, as they have them on all steamships.

Q. 33. What became of the waste water that flowed out of the relief-valve?

A. On that steamer it went overboard. It was a jet-condenser.

Q. 34. What was it that went overboard; the water from the relief-valve or the water that the pump took up from the hold?

A. The water from the relief-valve.

Q. 35. The pump you state was located in the hold?

A. Yes, sir.

123 Q. 36. Below the level of the water or above?

A. Just below the level of the water. The discharge was a little above the water.

Q. 37. What raised the water from the relief-valve up high enough to be discharged overboard?

A. The pressure that was behind it.

Q. 38. Then the valve was connected to a pipe which led to the outside of the vessel?

A. Yes, sir.

Q. 39. So that the water that ran through the relief-valve was also forced farther through a pipe to the outside of the vessel?

A. Well, it flowed over there itself. The pipe was put there to keep it from running into the hold. If it was in the hold they would have to pump it out with a bilge-pump, so they let it run out over the side.

Q. 40. How was the discharge-pipe connected with the discharge of the relief-valve?

A. Just by an ordinary flange-joint.

Q. 41. In your direct testimony you stated that in that valve

124 the cylinder, instead of having a small hole in it, as in the Bailey valve, was open altogether?

A. Yes, sir.

Q. 42. Did not the water flow out all round?

A. No, sir; it didn't do anything of the kind. As shown in the drawings of the Bailey patent, the screw-cap D, on the valve on the Lillian, was screwed down on the boss projecting from the main pile A, and the stem projected through the screw-cap. A shoulder was left on this stem outside of the screw-cap, instead of being inside, as it is in the Bailey patent. The spring was outside of the cap instead of inside.

Q. 43. Now go and state where the discharge was, and how it was made to discharge overboard.

A. The connection was just a pipe from the valve direct.

Q. 44. What I mean is, the object of this valve was to allow water to escape from the main pipe when the pressure exceeded a certain ratio?

A. Yes, sir.

125 Q. 45. Now what becomes of the water that escapes through that valve?

A. Just went out overboard, on that valve that I had to do with.

Q. 46. Then the relief-valve discharged into the main pipe, did it?

A. It discharged overboard.

Q. 47. I want to know where the water that was discharged through those openings in the cylinder went to?

A. It went overboard, through a pipe screwed into the discharge end of the relief-valve.

Q. 48. Then did that same pipe conduct the water from the pump which was forced by the pump?

A. No, sir; it did not. That was attached to the main feed-pipe of the boiler.

Q. 49. In that valve which you speak of were there any openings in the cylinder that contained the spring that allowed the water to escape from the valve?

A. There was no cylinder in there at all.

Q. 50. Then it was simply a pressure-valve applied along the length of the pipe; it connected the cylinder of the pump with the pipe, did it not?

126 A. Yes, sir; it connected the main feed-pipe from the pump.

Q. 51. Then was it not simply a pressure-valve?

A. Yes, sir; it was a relief-valve; the same as this (Complainant's Exhibit C).

Q. 52. But there was no outside discharge of water from that valve, outside of the main line of pipe, that that water ran through, was there?

A. Yes, sir. The discharge water that came from this went overboard, while the other water that was used went into the boiler. This was only a relief for the feed-pipe to the boiler. What water was not used in the boiler would go overboard through that. The pump, of course, the capacity is a great deal more than what is required to keep the boiler up.

Q. 53. Then this valve merely connected the discharge-cylinder of the pump with the feed-pipe that led from the pump to the boiler?

A. Just connected with the feed-pipe?

Q. 54. A pipe led from the cylinder of the pump overboard?

A. No, sir; I didn't say that at all.

Q. 55. Please make a sketch showing the location of the pump-cylinder, valve, & pipe.

127 A. (The witness makes a diagram, which is offered in evidence by complainant, and marked Exhibit A, Deacon.)

Q. 56. A feed-pump for boilers works continuously, does it not?

A. Yes, sir; it works whenever the engine works.

Q. 57. Then this relief-valve served to regulate the pressure on that feed-pipe so that when the pressure in the boiler became less the pump worked, is that it?

A. No, sir; it didn't do anything of the kind. There is two boilers in the vessel. That pump was working all the time, and the supply of water was regulated by adjusting a cock, and when they shut that cock off of course the water had to go somewhere or burst the pipe, and that relief-valve was put there so as to get rid of the surplus water that the pump was throwing.

Q. 58. Then this waste-pipe would become the main pipe, would it not?

A. The water would pass out through that pipe.

Q. 59. Then would not that become the main pipe?

A. Well, all the water would go through it anyway.

128 Q. 60. Then this relief-valve was not operating when the cock was opened and the water passing into the boiler?

A. Oh! yes; it was to a certain extent all the time, because the capacity of the pump was very much greater than the boiler could take. The pump was working its full capacity, and that was put on there for a relief-valve, to relieve the pressure on the pipe.

Q. 61. But before that valve operated you had to shut off the cock which conducted the water into the boiler?

A. There was two cocks. If both of those cocks were wide open, then all the water would go into the boiler, and that would be inoperative. There was four pumps worked through that pipe on that vessel.

Q. 62. Was there a relief-valve to each pump, or one relief-valve for all?

A. One relief-valve to all.

Q. 63. (Mr. PRESTON.) Mr. Deacon, at the time you were transferred to the Lillian under what flag was she sailing?

A. She was a government vessel, and had been out on one or two cruises before that time.

Q. 64. Under the American flag?

A. Yes, sir.

129 *Sam'l Rainey.*

Examination-in-chief of SAMUEL RAINEY by Mr. PRESTON:

Q. 1. State your name, age, & occupation.

A. Samuel Rainey; forty-seven years of age; machinist; my present occupation is superintendent of engines of the San Francisco fire dep't.

Q. 2. Are you familiar with the specifications, drawings, and claims in the letters patent reissued to Charles E. Blake, being Complainant's Exhibit A?

A. I have seen it.

Q. 3. Are you familiar with the drawings & specifications & the claim in that patent?

A. Yes, sir.

Q. 4. Are you familiar with the construction & operation of automatic relief-valves?

A. Yes, sir. I am with the Orr automatic relief-valve in particular.

Q. 5. Are such things common in your profession?

A. They are now; yes, sir.

Q. How long have you known of the use of automatic relief-valves upon steam-pumps?

A. The first time I ever knowed of any being there was in 1861.

130 Q. 7. State where.

A. On the steamer Golden Gate.

Mr. BOONE. For what purpose is this testimony introduced?

Mr. PRESTON. To show the state of the art.

Q. 8. What was the function of that valve?

A. Well, it was to save the feed-pipes, or the discharge-pipes from bursting.

Q. 9. Whence did the pressure come which operated the valve?

A. From the feed-pump.

Q. 10. What kind of a pump was that?

A. Steam-pump.

Q. 11. Will you look at the model marked Complainant's Exhibit C?

A. (Witness examines Exhibit C.)

Q. 12. You are familiar with the model of relief-valve put in evidence by defendants in this case?

A. Yes, sir; the Orr valve.

Q. 13. State whether or no there are any differences in construction between the valves marked respectively Defendants' Exhibit A and Complainant's Exhibit C?

A. Well, there is some difference.

Q. 14. What is the differen e, so far as the same relates to the adjustment or weighting of the spring?

131 A. The Orr is adjusted by right and left hand screws. This "C" is adjusted by a cap on the top.

Q. 15. What is the object of the small holes in the Bailey valve?

A. That is to make the valve so it will not be automatic—not raise. It is a sort of plug.

Q. 16. By means of those it can be used as a stop-valve?

A. Yes, sir.

Q. 17. What would be the effect upon the adjustment of the spring of so using it?

A. The valve then is immovable; the spring cannot close & allow the valve to raise.

Q. 18. What is the effect upon the automatic action of the valve of placing a pin through those holes in the valve?

A. The automatic action of the valve is destroyed.

Q. 19. Now, in setting the valve in order to place that pin in the stem of the valve, is it necessary to move the screw-cap?

A. Yes, sir. You have got to slack up the cap until the holes
132 come opposite.

Q. 20. Then by moving the screw-cap for the purpose of setting the valve so as to destroy its automatic action, what effect would it necessarily have upon the adjustment of the spring?

A. Why, you would have to alter the pressure on the spring. You take it nearly all off to get up there.

Q. 21. Then can you use the pin-hole & key on the Bailey valve without any interference with the adjustment of the spring?

A. No.

Q. 22. Now how is that in the Orr valve?

A. The Orr valve is always automatic. You can't alter them. It is an automatic relief-valve.

Q. 23. At all times, whether used as a stop-valve or not?

A. Well, no. You can screw it off the seat, you know. You can either make a churn-valve of the Orr valve or an automatic relief-valve. Of course, when you use it as a churn-valve, there is no valve there at all.

133 Q. 24. When acting as a valve for the purpose of regulating pressure, is it at all times automatic?

A. Yes, sir.

Q. 25. Then the two valves are different in this respect?

A. Yes, sir.

Q. 26. Please examine the Bailey patent, Complainant's Exhibit A, with reference to the arrangement of the valve-pipe and steam-pump, and, after doing so, state whether the arrangement of the Orr valve upon steam fire-engines in use by the fire department of the City and County of San Francisco is similar, and in what respects they differ?

A. The construction of the Bailey valve & the Orr valve are somewhat different.

Q. 27. I am alluding to the arrangement of the valve with reference to the engine.

A. Well, it is something similar on both. I have got the Orr valve arranged on some engines different from what I have on others. Some I have worked just the same as this (Defendants' Exhibit A); the pressure comes here on the bottom of the valve. On the others the
134 pressure comes on the top of the valve & draws it off.

Q. 28. Where is the Orr valve placed on the engines of the steam fire department?

A. On the pumps.

Q. 20. Is it placed on the engine or on the pipes, as shown in the drawings of the Bailey patent?

A. On the discharge-pipes of the pumps.

Q. 30. Then what difference, if any, is there between the arrangement of the Bailey valve, as shown by the drawing in the Bailey patent, & the arrangement of the Orr valve, as used by the steam fire department?

A. One is on the discharge-pipes & the other is connected direct on the pumps.

Cross-examination by Mr. BOONE:

Q. 1. Both accomplish the same purpose, do they not?

A. Yes, sir.

Q. 2. Their relative arrangement is the same—the relation the
135 valve bears to the engine and the hose?

A. Yes, sir.

Q. 3. Do you find in the Orr valve any equivalent of the pin & pinhole in the Bailey valve?

A. No, sir.

Q. 4. None whatever?

A. No, sir.

Q. 5. You state that you are a machinist, do you?

A. Yes, sir.

Q. 6. When the spindle in the Orr valve is turned down by means of the hand-wheel so as to be set permanently and fixedly on its seat, then is the spring in the Orr valve operative?

A. When it is screwed down on the seat; yes, sir.

Q. 7. Does not the pressure of the water come on the under side of the valve?

A. Not always.

Q. 8. But I am speaking of the valve, Defendants' Exhibit A.

A. No, sir.

Q. 9. Where does the pressure come?

136 A. It comes on the inside of the screw-cap.

Q. 10. Then, if the spindle be turned by means of the hand-wheel so as to draw the valve close up against the end of the opening underneath the valve, where would the pressure come?

A. Then you are using it as a churn-valve?

Q. 11. Then the spring is inoperative, is it not?

A. Yes, sir.

Q. 12. Then the pressure in the pipe would have no effect whatever on the spring?

A. No, sir.

Q. 13. It shuts the water off from the relief-valve, does it not?

A. You are using it then as a churn-valve.

Q. 14. The spring, though, is thrown out of use?

A. Yes, sir.

Q. 15. Both valves operating produce the same result?

A. Yes, sir.

Q. 16. Now I will ask you if the valve which you saw on the
137 steamer Golden Gate was arranged similar to the one described by Mr. Deacon, and represented on the diagram Exhibit A, Deacon?

A. I didn't see the relief-valve on the Golden Gate at all. I don't know whether it was the same as described by Mr. Deacon or not.

Q. 17. You never saw the valve?

A. I never saw the valve.

Q. 18. Then you did not know of your own personal knowledge that there was one?

A. Yes; I did know. I know that there must have been.

Q. 19. How do you know it?

A. Because I was tending water on the Golden Gate. There was a check-valve on the boiler. The pumps was always running, and when I wanted to put water into the boiler I would go and look at the gauge and try the cocks, then I would take this wheel & screw it off the valve-seat, & when I shut that down the pumps would still work. Where would the water go unless there was a relief-valve there?

138 My knowledge of mechanical engineering leads me to know that without that relief-valve in there the feed-pipes or the pipes or something else would burst.

Q. 20. That is, you knew there was something there to relieve it; whether there was a relief-valve or some other device, you knew that there was something there to relieve it?

A. There was something there to relieve it.

Q. 21. But you can't swear, from your own knowledge, that there was a relief-valve there?

A. I know that there must have been one there.

Q. 22. But you do not pretend to say that there is no other device except a relief-valve that would act in that manner?

A. Not that I know of.

Q. 23. But there might have been for all you know?

A. There might have been.

Q. 24. Then you cannot positively swear that there was a relief-valve on that steamer?

A. No, sir.

Q. 25. The effect on the hose would be the same with either

139 the Bailey valve or the Orr valve, would it not?

A. Just the same; yes, sir.

Q. 26. In the Bailey valve, when the pin is used in the pin-hole, has the spring any action whatever to perform?

A. No, sir.

Q. 27. The spring is thrown out of use entirely?

A. Yes, sir.

Q. 28. Then it is immaterial whether the tension on the spring is great or small, is it not?

A. It don't make no difference.

Q. 29. So that the adjustment of the cap in order to get the pin-holes in line would not matter if the pin was to be used in the pin-holes?

A. No.

Q. 30. It wouldn't matter, when that pin is in, whether the spring was condensed or expanded?

A. It wouldn't make no difference if there wasn't any spring in there at all. The principal difference between the two valves is this. The Bailey valve can't be raised off the seat, except the pressure of

140 the pump is greater than the pressure on the top of the valve; but the Orr valve, you can take it off the seat at any time, whenever you like, independent of what pressure is on the pump.

Q. 31. That has nothing to do, however, with the relief of the hose, has it?

A. Well, it has got a good deal to do with the relief of the pump.

Q. 32. But it has nothing to do with relieving the hose?

A. Yes; it takes pressure off the hose. I will tell you where that

thing comes in pretty handy. Supposing you should put your pump to work; you exhaust right into the smoke-stack, and when you get the exhaust up you can make steam faster; so that when we get down to the dock to get water on, we take the valve off the seat until we get steam up, & then we screw it on, and it operates as a relief-valve.

Q. 33. Then the advantage comes in getting up steam?

141 A. Yes, sir.

Q. 34. But for practical use the Bailey valve answers the same purpose?

A. Well, I never have had much experience in the Bailey valve. There is a difference in those valves; some relieve and some don't.

142 TUESDAY, *October* 14, 1879.

Present, Mr. Boone, of counsel for complainant; Mr. Preston, of counsel for defendant.

REBUTTAL.

(Counsel for complainant puts in evidence a copy of the decision of the examiner-in-chief on appeal upon the application of Charles E. Blake for reissue of letters patent number 41471, dated February 9, 1866.

Defendant admits the correctness of the copy, but objects to its introduction in evidence, upon the ground that it is incompetent, in that the defendant in this case was not a party to the proceedings before the said examiners-in-chief on appeal, and are not concluded thereby; and, further, on the ground that it is not evidence in rebuttal, and is incompetent to prove the novelty of the claim in the reissued letters patent.

Said copy of decision is marked "Complainant's Exhibit C".

143 Complainant's counsel also puts in evidence certified copy of the file-wrapper and contents and drawing in the matter of the letters patent granted to Thomas H. Bailey, number 41471, February 9th, 1864, for valve for water cylinder, etc., marked "Complainant's Exhibit D".)

Mr. PRESTON. I will ask for what purpose counsel introduces the file-wrapper.

Mr. BOONE. For whatever purpose it may be used for.

(Defendant objects to "Exhibit D", on the ground that it is incompetent to prove the novelty of the claim in the reissued letters patent to Blake, and furthermore, that it is not rebuttal, and that it is immaterial and irrelevant.)

Mr. BOONE. The object in putting in evidence Exhibit D is

144 to show the date of the original application of Thomas H. Bailey, and the acts done in connection therewith.

Testimony closed.

I further certify that said depositions were, by agreement of counsel for the respective parties in said cause, taken down in short-hand by S. C. Houghton, and that the reading of said depositions to the respective witnesses and the signing thereof by them were waived, and I have retained said depositions in my possession for the purpose of presenting the same with my own hand to the court for which they were taken.

And I do further certify that I am not attorney nor of counsel for either of the parties in the said deposition and caption named, nor in any way interested in the event of the said cause.

In testimony whereof I have hereunto set my hand this 30th day of October, A. D. 1879.

JOS. F. O'BEIRNE,
Examiner.

145 In the circuit court of the United States for the ninth judicial circuit, in and for the district of California.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO.

Be it remembered that on this 3d day of July, A. D. 1880, at my office, in the City and County of San Francisco, State of California, before me, J. F. O'Beirne, an examinationer in chancery, duly appointed by the circuit court of the United States for the ninth circuit and district of California, personally appeared George Pardy, William Deacon, and John M. Stockman, witnesses on behalf of defendant, in the above-entitled action.

J. L. Boone, esq., appeared as counsel for complainants, and E. F. Preston, esq., as counsel for defendant.

And the said witnesses, having been by me first duly cautioned and sworn to tell the truth, the whole truth, & nothing but the truth in the cause aforesaid, did then and there depose and
146 say as follows, that is to say:

SATURDAY, *July 3d*, 1880.

Present: Mr. Boone, of counsel for complainant; Mr. Preston, of counsel for defendant:

Examination-in-chief of GEORGE PARDY, a witness on behalf of defendant:

By Mr. PRESTON:

Q. 1. You have been sworn before in this case?

A. Yes, sir.

Q. 2. I believe you testified you were by profession a mechanical engineer?

A. Yes, sir.

Q. 3. Have you examined letters patent 7886, reissued to Charles E. Blake, Defendants' Exhibit A?

A. Yes, sir.

Q. 4. Are you familiar with the specifications and claims of that patent?

A. Yes, sir.

Q. 5. (Showing Complainant's Exhibit B.) You have examined the mechanical construction of the valve?

147 A. Yes, sir.

Q. 6. Will you point in that device to the particular portion or claim, the second claim, of the patent I have mentioned?

A. The claim in terms here is to cover the whole valve as a combination of elements, by which the valve may be held upon its seat with a variable, yielding pressure, or held immovable upon the seat, or held from its seat or open; in other words, it is a combined relief and stop-valve.

Q. 7. By the words "relief-valve" you mean it is a synonym of automatic relief-valve?

A. Relief-valve or safety-valve. The terms "safety-valve" and "relief-valve" being synonymous.

Q. 8. You are familiar with valves of this kind?

A. Yes, sir; perfectly.

Q. 9. State what, if anything, you know about automatic relief-valves as a matter of ordinary, common, mechanical device, prior to the year 1864?

148 A. I was very familiar with automatic relief-valves long prior to 1864, and I don't think that I knew any of those valves incapable of being operated as a stop-valve. They were all capable of performing that function, and most of valves were always capable of being held from their seats exactly as occurs in the Bailey valve; in fact, I would say there is nothing new in having a relief-valve and stop-valve combined.

Q. 10. How with reference to holding them upon their seats? You said they could be held from their seats?

A. Could be held from their seats and upon their seats.

Q. 11. Automatic valves, as a matter of common, mechanical device, then, were in common and ordinary use prior to 1864?

A. Yes, sir; to my own personal knowledge.

Q. 12. I have here some drawings of different kinds of valves. Do you know by whom these drawings were made?

A. I made them myself.

149 Q. 13. I show you Defendants' Exhibit E, a drawing of a valve.

(Complainant's counsel objects, on the ground that no notice has been given of the introduction of any such claim; nothing to show what it purports to be or what it is introduced for.)

Mr. PRESTON. We offer this as explanatory of the testimony of the witness, for the purpose of proving the state of the act, & to assist us in the construction of the second claim of the reissue patent, & also for the further purpose of proving that the second claim of the reissue patent does not cover anything which was the subject of invention, or that as to the second claim there was no invention.

(Mr. Boone urges the objection.)

Q. 14. I have called your attention to the drawing marked Def'ts' Exhibit E. Please state what you know with reference to the valve therein delineated.

A. This valve marked "Exhibit E" is about one of the first valves I was ever acquainted with. I have no hesitancy in saying that I saw that valve long prior to 1864, but it is impossible for me to say

150 precisely the time I did see it. There were a number of valves in the store-room of the Vulcan Iron Works at the time I went there in 1858, and this valve was amongst the others. I saw it in that store-room long prior to 1864.

Q. 15. Was that an automatic relief-valve?

A. That is an automatic relief-valve. It is a valve that can be held upon its seat by screwing the cap down until the top of the guide in the cap strikes upon the top of the stem of the valve. The valve can be in a practical sense opened when the valve-cap A is screwed up so as to release the tension on the spring, or the valve can be easily taken out altogether, so that practically it has the same functions in every respect that the Bailey valve has.

Q. 16. The stem in the exhibit marked B, does it correspond to the stem of the valve shown in the reissue patent I have mentioned marked D?

A. It does.

Q. 17. How is the spring arranged relatively in comparison with the spring, as shown on the drawing of the Bailey reissue?

151 A. They are both arranged precisely in the same way.

Q. 18. Spiral spring surrounding the stem?

A. A spiral spring surrounding the stem inserted between the valve & the cap.

Q. 19. The arrangement of the screw-cap marked A, in the exhibit marked E, is arranged how, relatively to the screw-cap marked D in the Bailey reissued patent?

A. Both caps are precisely alike in their arrangement.

Q. 20. Operating with a screw-thread on the body of the valve chamber?

A. Operating with a screw-thread on the body of the valve chamber.

Q. 21. So that it may be either raised or lowered at pleasure by turning it?

A. Yes.

Q. 22. I will ask you the further question; when that cap was screwed down so as to rest upon the top of the valve stem B, what would be the operation or result as compared with the operation of the key and pin-hole through the stem and cap of the Bailey valve with relation to the holding of the face of the valve upon its seat?

152 A. Both valves would do the same thing.

Q. 23. Be held immovably upon the seat?

A. Being held immovably upon the seat.

Q. 24. I will call your attention now to the drawing of that valve marked Defendants' Exhibit F. Please look at that.

(Complainant's counsel objects to the exhibit, on the same ground.)

Mr. PRESTON. The offer is made for the same purpose as the drawing delineated in Exhibit E is offered.

Q. 25. Please describe the valve shown by this Exhibit F.

A. This valve, Exhibit F, is one of the commonest style of boiler safety-valves. I saw this valve long prior to 1864. The valve can be operated as a stop-valve by inserting a wedge above the lever between the guide, and it can be operated to keep the valve open by inserting a wedge in the lever-guide, but below the lever. There is no function possessed by the Bailey valve but is possessed by this valve, practically speaking.

Q. 26. This valve shown by Exhibit F is arranged with a knob & weight?

153 A. Which takes the place of the spring.

Q. 27. The mechanical result——

A. The mechanical result is the same, the weight and lever of course being an equivalent of the spring. It is merely a means of obtaining pressure upon the valve.

Q. 28. I now call your attention to a valve shown by a drawing marked Defendants' Exhibit G.

(Complainant's counsel makes the same objection.

Mr. Preston states the same object of the introduction of the evidence.)

I will ask you if you have ever seen a valve delineated by that drawing; and, if so, when and where?

A. This valve is a copy of the valve exhibited in the Bailey's patent, with a slight change made in the cap, so that the stem will not pass

through the cap. When the valve is constructed in that form it is precisely similar to valves that I have seen before.

Q. 29. When and where?

A. In San Francisco, long prior to 1864. I might except, how-
154 ever, that I probably did not see the piston attached to the valve; but if the piston is taken away, then the balance is common to my knowledge.

Q. 30. Why did you not see the piston?

A. I may have seen it, but I cannot be positive of it. I know it is very common, but I could not say I saw it before 1864. I have seen it after 1864, certainly.

Q. 31. What is the difference, or distinction, between that valve shown by Exhibit G and the Bailey valve, as shown by the drawings of the reissue patent?

A. The difference is in the cap. In the Bailey patent the stem passes through the cap. In this Exhibit G the stem is not allowed to pass through the cap, but the hub of the cap encloses the stem. That is an arrangement to prevent leakage.

Q. 32. What would be the effect of securing the cap of that valve down upon the head of the stem?

A. If you screw that valve down until the cap of the cavity strikes the head of the stem the valve will be kept closed; but it is
155 then a stop-valve.

Q. 33. Is that synonymous with the term "screw-plug"?

A. Well, the screw-plug does the same thing in a different way; it does the same act in a different manner. The result is the same as far as holding the valve down upon its seat.

Q. 34. It would hold the face of the valve down upon its seat rigidly, would it?

A. It would hold the valve down rigidly. You can also, with this valve, exactly as it is in Exhibit G. If you want to allow the valve to open so that water will pass through the valve, all you have to do is to screw the cap up until you have released all tension from the spring. Then, practically, the valve is open. If the whole of the valve was turned upside down then the valve would fall from its seat.

Q. 35. I show you the valve designated upon Defendants' Exhibit H.

(The same objection by complainant's counsel, & defendants' counsel states the same object of the introduction.)

156 A. This Exhibit H is another very common style of valve which I saw prior to 1864. I have a memorandum which tells me that I saw that in 1860 or 1861. This valve operates as an automatic relief-valve. It will operate as a stop-valve, and the valve can be held from its seat. If you wish to hold the valve from its seat you simply stick a wedge between the collar on the stem and the top of the gland of the stuffing-box. If you wish to hold the valve down upon its seat you can screw down the nuts A' an' A'' until the cross-bar A strikes on the top of the shoulder B; then the valve will be immovable—closed upon its seat. That is a very common valve.

(The Orr valve is marked "Defendants' Exhibit I.")

Mr. PRESTON. This is the valve used by the defendants, which has been introduced at a prior stage of the proceedings, and prove' to be so by the testimony of the complainant.

Q. 36. I wish to call your attention to this Orr valve. The
157 stem D of the Bailey valve is shown to be what—a cylinder, screw, or what?

A. It is solid.

Q. 37. A smooth cylinder?
A. Yes, it is smooth; it has no thread cut on it.
Q. 38. Please examine the stem of the Orr valve.
A. The Orr valve has a thread cut on it.
Q. 39. The stem of the Orr valve?
A. The stem of the Orr valve has a thread cut upon it.
Q. 40. Where does the Bailey valve receive the pressure?
A. The Bailey valve receives the pressure underneath, on its face.
Q. 41. On the face of the valve marked F?
A. Yes.
Q. 42. That pressure operates to raise what?
A. To compress the spring—raise the valve & compress the spring.
Q. 43. What do you mean by the valve?
A. Raise the valve marked F, and to compress the spring.
Q. 44. Does it raise the spring D also?
158 A. It raises the spring D with the valve.
Q. 45. Operating, then, as a piston?
A. Operating as a piston.
Q. 46. The head of the stem passing out through the screw-cap?
A. Yes, sir; the head of the stem passing out through the screw-cap, moving up and down.
Q. 47. What is the difference in the mechanical construction of these two valves?
A. There is a great deal of mechanical difference in the construction, but none in the functions of the valves. Both valves have the same functions, excepting that the Orr valve performed its functions in a much better and improved way; for, when the valve is operated as a stop-valve, it does not necessarily interfere with the tension or adjustment of the spring. When you operate with the Bailey valve as a stop-valve you do necessarily interfere with the adjustment of the spring.
In this respect I consider the Orr valve improved upon the
159 Bailey valve. This is a great difficulty in using these valves on fire-engines, because, if the valve is once adjusted to perform for a certain pressure upon the hose, every time that you have occasion to use the valve as a stop-valve, with the Bailey valve the adjustment is lost, and it is often troublesome to attain the exact adjustment again. That is the way I interpret it. This is not the case with the Orr valve.
Q. 48. Will you please look at the second claim of the reissue patent, and state whether, from the combination of the elements therein mentioned, you can operate that valve as a stop-valve?
A. Well, there is the absence of a pin. You can't do without a pin; and that is not in the combination.
Q. 49. Then, in order to operate the Bailey valve as a stop-valve, an element not mentioned in the combination in the second claim of the patent would have to be introduced to work that result?
A. Yes, sir; the pin would be just as important as the hole into which the pin goes.
160 Q. 50. Then, what is the result with respect to the automatic action of the Bailey valve when a pin is passed through the pin-hole in the cap and a pin-hole in the stem?
A. The automatic action of the valve, of course, is destroyed; it would cease then to be an automatic valve.
Q. 51. Is it a valve of any kind?
A. It could be operated as a stop-valve.
Q. 52. Then, at the point where the face of the valve rests upon the

seat, the keying of the stem to the screw-cap, by means of the pin-hole and pin, causes the valve to operate as a stop-valve?

A. Yes, sir.

Q. 53. Would that be true at any elevation from the seat of the valve at which you might key the stem?

A. Well, if you raise the valve from its seat, of course——

Q. 54. (Int'g.) It ceases to be a valve?

A. Well, it is there as an organism, capable of being used as a valve at any time.

161 Q. 55. But in that position is it a valve? Could it operate as a valve? Suppose the face of the valve was raised half-way up in the piston-box and the stem of the valve then keyed through the screw-cap, what would be the operation of the device?

A. Well, it would be a stop-valve opened.

Q. 56. There would be no mechanical operation whatever, would there?

A. As a relief-valve there would be none.

Q. 57. (Mr. BOONE.) In other words, the object of the pin is to make a stop-valve.

A. Yes, sir.

Q. 58. (Mr. PRESTON.) Is the stem of the Orr valve attached to the screw-cap in the same manner as the stem of the Bailey valve?

A. Oh, no.

Q. 59. What is the difference?

A. One is attached to the cap by a pin, and the other is a thread passing through the cap, which difference brings about very important results.

162 Q. 60. How is the stem of the Bailey valve attached to the screw-cap when the pin is not inserted through the cap and stem?

A. It is not attached at all, except that it passes through it.

Q. 61. Then, to operate the Bailey valve as a stop-valve, the attachment of the stem to the cap must be different from that when it operates as an automatic relief-valve?

A. Yes; it must be different.

Q. 62. (By Mr. BOONE.) The what must be different?

A. The attachment must be made when it operates as a stop-valve, and the attachment must not be made——

Q. 63. (Int'g.) What attachment do you refer to?

A. The stem to the cap. The attachment must have that when it operates as an automatic relief-valve; that is self-evident.

163 Q. 64. (By Mr. PRESTON.) Then the changing of the operation of the Bailey relief-valve into the stop-valve is made, how with reference to the attachment of the valve-stem and the screw-cap?

A. By changing it.

Q. 65. Is the attachment of the stem of the air-valve and the screw-cap ever changed; whether operated as a stop-valve or an automatic relief-valve?

A. No; there is no change ever made in the Orr valve, no change at all.

Q. 66. Where is the pressure received in the Orr valve to operate it automatically?

A. The pressure is received on the inside of the cap L K.

Q. 67. (By Mr. BOONE.) When it operates how?

A. When it operates as a relief-valve there is also a pressure on the

back of the valve D, and in such a case as the area of the screw-cap above is very much greater than the area of the back of the valve; of course, the screw-cap will raise the valve.

Q. 68. (Mr. PRESTON.) Does the screw-cap on the Bailey valve ever raise?

164 A. No; not when it is acting automatically as a relief-valve.

Q. 69. The arrangement of the stem of the Orr valve by means of a screw-thread working through the screw-cap constitutes a connection with the heads of the wheel on top of the valve; what sort of a valve, if any?

A. It constitutes a stop-valve, or what is sometimes called by firemen a churn-valve.

Q. 70. Can the Orr valve be screwed down upon its seat so that it will remain there stationary when the pressure is greater than the spring is set to counteract?

A. No. When your pressure is greater than the spring will resist it must raise the valve.

Q. 71. Then, when the Orr valve is screwed down upon its seat it constitutes an automatic valve?

A. It never ceases to be an automatic valve until the spring is completely compressed together, solid.

Q. 72. When the Bailey valve is down upon its seat, with the

165 pin through the key-hole, is it an automatic valve?

A. No; It is not an automatic relief-valve at all.

Q. 73. Then, the resistance of the Orr valve to pressure when the valve-face is screwed down upon its seat——

(Question objected to as leading.)

Q. 74. What combination of elements of the Orr valve is used when the face of the valve is screwed down upon its seat to make it resist pressure?

A. The whole combination.

Q. 75. Specify them, please.

A. The valve & the stem & the spring & the cap & the adjusting-nut and the lower part of the box of the spring.

Q. 76. They all perform functions?

A. They all assist in performing the function of part of it.

Q. 77. When the Bailey valve is fixed rigidly upon its seat by means of the pin passing through the key-hole, what function does the spring perform in holding it there?

166 A. The spring then is left out of the combination; it is not an element in use at all; it is an element out of use.

Cross-examination of George Pardy by Mr. BOONE:

Q. 1. I believe you testified in the former examination as to your age?

A. Yes, sir.

Q. 2. What was it?

A. I think thirty-nine.

Q. 3. That you were thirty-nine then?

A. Thirty-nine then, I believe I testified it.

Q. 4. That would make you how old in 1864?

A. It would make me twenty-four years old.

Q. 5. Have you any connection with the fire department?

A. Have I had any connection? No, sir; not immediately.

Q. 6. Have you ever had anything to do with the construction

167 of fire-engines?

A. I have made some drawings for repairing the fire-engines on several occasions.

Q. 7. When?

A. I could not state when precisely, but between the years 1860 and 1866.

Q. 8. Did you make any before 1864?

A. I could not positively state, sir.

Q. 9. Your memory on that point is not good?

A. I couldn't tell you what time I made those drawings. I can only state that I made them in the Vulcan Iron Works, & I know I was in the Vulcan Iron Works from 1858 to 1866 or '7; and it was during that time I made them, but I don't remember what part of the time.

Q. 10. Whom were they made for?

A. I couldn't tell you.

Q. 11. Have you any memorandum of the transaction you could refer to to refresh your memory?

A. No; I don't think I have.

Q. 12. Was it for a private person or for the City and County of San Francisco?

168 A. I couldn't state positively whom it was for.

Q. 13. How many drawings did you make of steam fire-engines?

A. Of steam fire-engines?

Q. 14. Yes; prior to 1866.

A. I couldn't tell you. I never made a drawing of a steam fire-engine complete—not before that time; I have since.

Q. 15. What parts of the steam fire-engines did you make a drawing of before that time?

A. I have an indistinct recollection of making a brake once for the City and County of San Francisco, to go on one of their fire-engines, but it is in a very uncertain—I can't certainly state whether I did or not.

Q. 16. Whether it was before or since 1866?

A. It was before 1866.

Q. 17. Was it before 1864?

A. Yes; I don't know; somewhere about 1864, I should think. I couldn't tell you anything about what drawings I have made. I have no memorandum whatever; they are not in my possession.

169 Q. 18. Then, up to 1864, you were entirely ignorant of the construction of steam fire-engines, so far as the drawings of steam fire-engines is concerned?

A. Not by any means. I was very well acquainted with steam fire-engines long prior to that. An engineer who has any brains at all, six months in his profession, must understand them, in a general way, without any reference to details.

Q. 19. That was about your condition at that time?

A. That was about my condition at that time; yes, sir.

Q. 20. And you paid no particular attention——

A. To the details, no.

A. 21. When did you first see a relief-valve applied to a steam fire-engine between the pump-cylinder and the hose?

A. I probably never saw such a thing until this suit was brought up, that is actually so placed. I have seen analagous things; that is all.

Q. 22. I am speaking of this one thing. These exhibits put

170 in evidence, Exhibits E, F, G, & H, were made by you, were they?

A. Yes, sir.

Q. 23. They represent ordinary safety-valves, do they?

A. Yes, sir; safety or relief-valves.

Q. 24. Did you ever know of either of these valves being applied to a steam fire-engine?

A. No, sir; I do not.

Q. 25. They are simply general valves for relieving pressure, are they?

A. That is all.

Q. 26. To produce safety in a boiler?

A. No, sir; they are for producing safety on a good many different machines?

Q. 27. Did you ever see these valves in actual operation, any of them?

A. Yes, sir.

Q. 28. Which ones?

A. I saw Exhibit F and Exhibit E.

Q. 29. Where did you see them, in what connection?

A. Exhibit F I have seen a great number of times, fifty, sixty, a hundred times. I don't know how many. On boilers generally.

Q. 30. For what purpose?

A. To relieve the boiler of steam pressure, excessive steam pressure.

171 Q. 31. When used for that purpose, is it ever necessary to make a stop-valve of it?

A. It is very frequently done.

Q. 32. I asked you if it is ever necessary?

A. I could not judge of the necessity unless I knew the occasion.

Q. 33. What is it done for?

A. It is done to obtain a greater pressure upon the boiler than the capacity of the valve will resist; as, for instance, if the valve is only capable of resisting a hundred pounds of pressure, and, upon an occasion, one hundred & ten pounds is required, then it could be and would be used as a stop-valve.

Q. 34. Are not such safety-valves generally applied of a capacity to suit the use to which they are placed?

A. Generally they are.

Q. 35. Is it usual, or is it a customary thing, to convert a safety-valve into a stop-valve?

A. Of this kind?

Q. 36. Yes.

A. Oh, no; it is not customary, so far as I am aware. It is only in an emergency that they do it. It is only in an emergency that it would be done; that is all.

172 Q. 37. Such an emergency never would arise if the valve was properly constructed & adapted to the boiler to give the proper amount of pressure?

A. If the valve would give all the pressure needed you would not need to use it as a stop-valve; that is self-evident.

Q. 38. But do you know of any instance where it is necessary to convert a safety-valve into a stop-valve, independent of any yielding whatever?

A. Yes.

Q. 39. If a man wanted to burst a boiler I presume he would want to convert it into a stop-cock?

A. Yes, sir.

Q. 40. But is there any instance where it is necessary to convert a safety valve into a stop-valve, and shut off all yielding whatever?

A. Only on those occasions when you want to have a greater pressure than the valve will permit.

Q. 41. Could not they put ten pounds more weight on the end of
173 the lever in that exhibit, & thus get an increased amount of pressure; is not that the usual way that engineers take to increase the pressure of the boiler?

A. That is the usual way with this kind of valves.

Q. 42. Then, is it ever necessary to convert it into a stop-valve entirely?

A. Not with this valve F.

Q. 43. Is it with any of the safety-valves represented in the suit?

A. I change my mind in that answer; it is very necessary at times.

Q. 44. State when.

A. When the boiler is being tested.

Q. 45. Is not it usual in such a case to stop the engine entirely?

A. No, sir; it is usual to keep your engine running, to get rid of all your steam.

Q. 46. Did you ever see a valve such as Exhibit H in use?

A. I couldn't positively state.

Q. 47. Did you ever take any of the dimensions of the valve represented upon Exhibit H?

A. Oh, yes; many times.

Q. 48. For what purpose did you take the dimensions?
174 A. Generally to make drawings from such valves.

Q. 49. Did you ever make any drawings of it before 1864?

A. No; I couldn't state; I couldn't state that.

Q. 50. Took no dimensions prior to 1864?

A. I couldn't state. I have no knowledge on that point.

Q. 51. Now, I will ask you, in case the screw-threads on the standards marked a' a'' should not extend far enough down to permit the nuts to force the cross-head downwards sufficiently to condense the spring entirely, could that valve be made a stop-valve?

A. Undoubtedly it could.

Q. 52. How?

A. It would strike the shoulder of the stem. That is the way that valve operates.

Q. 53. Then, in case the screw-threads should not extend down far enough to allow the cross-head to strike the shoulder of the stem, could it then be converted into a stop-valve?

175 A. No; not without changing the operation. I could make it so easy enough by putting a wedge in there underneath the cross-bar.

Q. 54. Did you ever see a valve similar to Exhibit E in use prior to 1864?

A. I couldn't answer that question positively.

Q. 55. Would not the same thing be true of the valve represented by Exhibit E, as just stated by you, in relation to Exhibit H, as to converting it into a stop-valve?

A. If the screw was not cut down far enough why of course it would not operate as a stop-valve; but ordinarily those screws are cut down far enough.

Q. 56. I will ask you if the object of this valve is not more particularly intended in its construction as a relief-valve for the relief of pressure?

A. That is the object of the valve.

Q. 57. If it performed any other service then it would be accidental?

A. Not at all, not at all. It would be just simply using one
176 of the capabilities or functions of the valve when the necessity arises.

Q. 58. If it did not possess that capability it could not use it?

A. No; if it did not possess that capability it could not use it, as a matter of course.

Q. 59. But the objects of those valves is to relieve pressure simply inside, and to give vent at all times when the pressure exceeds a certain amount?

A. Generally that is the object of those valves.

Q. 60. You never saw one operated as a stop-valve prior to 1864?

A. I couldn't positively state.

Q. 61. Would not the same thing be true with reference to Exhibit G, that you have last testified to?

A. Yes; those objections run through all of them; if they were not properly constructed they would not act properly, that is a self-evident proposition.

177 *William Deacon.*

Examination-in-chief of WILLIAM DEACON, a witness on behalf of defendant.

By Mr. PRESTON:

Q. 1. State your name, age, and occupation.

A. I am a machinist; age 47.

Q. 2. How long have you been engaged in that business?

A. Since 1852.

Q. Are you familiar with relief and stop-valves?

A. Yes, sir.

Q. 4. With the construction of steam fire-engines?

A. Yes, sir.

Q. 5. What experience, if any, have you had with the construction of steam fire-engines?

A. I guess I reconstructed all there is in town, & built one new one.

Q. 6. How long have you been engaged in & about steam fire-engines?

A. Since 1868, I think; 1868 or '9 I commenced working on them.

Q. 7. Have you had your attention drawn, at any time, to the
178 construction of automatic relief and stop and hand valves?

A. Yes, sir.

Q. 8. In what way?

A. In connection with fire-engines. I saw a number of tests made of different relief-valves.

Q. 9. (By Mr. BOONE.) State when.

A. I can hardly tell you the year, but it was up here near Stockton street, on that square, where they were testing different valves. It must be 4 or 5 years ago.

Q. 10. Was not that Dr. Blake's valve that they were testing at that time?

A. I believe it was.

Q. 11. (By Mr. PRESTON.) Do you know what engine they are using now in the department?

A. Yes, sir; the Amoskeag, nearly all; there is one that is not.

Q. 12. You are sure it was Dr. Blake's valve they were testing, or the Orr & Fonty's valve?

A. I don't know.

Q. 13. When was it; in 1869?

A. I guess about 1871 or '2; I can describe it to you.

179 Q. 14 (By Mr. BOONE.) I will show you Complainant's Exhibit B, known as the Bailey valve.

A. It was not that.

Q. 15. (By Mr. PRESTON.) I will ask you to look at the drawings, specifications, claim of United States letters patent, reissue 7886, being Complainant's Exhibit A.

A. It was not that valve that I saw.

Q. 16. Now look at the second claim of the patent.

A. Yes, sir; I see the claim.

Q. 17. Look at this valve on Complainant's Exhibit B.

A. This valve is the same valve.

Q. 18. As shown by the drawing of the patent?

A. Yes, sir.

Q. 19. Are you familiar with the construction of this valve?

A. Yes, sir; I just had it apart. There is nothing new about that, that I could see.

Q. 20. How long have you been acquainted with valves of that description?

A. Well, since 1860. I have noticed them—they have been

180 brought under my regular supervision—since 1860 or 1861; about there; I had charge of the thing.

Q. 21. Valves similar in construction to that?

A. Yes, sir; mechanically the very same.

Q. 22. Did they operate the same?

A. Yes, sir; operated the same.

Q. 23. Was that an ordinary mechanical device in 1860, that valve?

A. This relief-valve was, that is this business here, in adjustment the same. Instead of its being a cap like this going on, there was just two standards. I think I saw a drawing here of the same.

Q. 24. Defendants' Exhibit H?

A. That is the valve that I have referred to.

Q. 25. Are you familiar with the manner in which the valves in use by the San Francisco fire department upon steam-engines are attached to the engines?

A. Yes, sir.

Q. 26. Will you examine this valve known as the Orr valve? (Defendants' Exhibit I.)

181 A. I have seen it.

Q. 27. Are you familiar with the mechanical construction of that valve?

A. Yes, sir.

Q. 28. Will you please point out the differences in the mechanical construction & operation of those two valves?

A. This valve (Defendants' Exhibit I) will work where that Bailey valve will not. That is attached to steam fire-engines. This is the discharge side of the pump. The pressure is on the back of the valve, & it is raised by the pressure in this cap, & it raises this valve against

the pressure in the pump; that makes it pass over—makes it a relief-valve—while this one, the Bailey valve, it must have a pressure on the under side of the valve itself to lift it; and it cannot be applied to fire-engines as these are—to the Amoskeag fire-engine, I mean.

Q. 29. The mechanical operation of the valve, then, operates by the reverse action of the pressure, if I could use such a term. The
182 pressure operates reversely on the two valves, one on the face and the other behind?

A. Yes; that is what it is; it is really an attachment of the valve. It is upon here but the pressure is on here.

Q. 30 (By Mr. BOONE.) The pressure that operates the valve is on the upper one?

A. The pressure is here and still there at the same time.

Q. 31 (By Mr. PRESTON.) What is the difference in the attachment of the stem of the Bailey valve and the stem of the Orr valve to the screw-cap?

A. Well, the Orr valve has a thread in the screw-cap that makes this to a certain extent a stop-valve, while the stem on the Bailey valve, it just slides through the cap & is not a stop-valve unless there is a pin put through that hole there; & then it is stopped down dead.

Q. 32. Can the Orr valve by the construction of the stem & the cap be opened from the outside of the valve?

A. Yes, sir; the Orr valve can.

Q. 33. Can the Bailey valve be?

A. No, sir; it cannot.

183 Q. 34. How can the Bailey valve be raised from its seat in order to hold it up off its seat?

A. By putting a pin through that hole & unscrewing the cap.

Q. 35. How can you raise the stem?

A. By unscrewing this cap after the pin is in you start and unscrew that which makes the valve a part of the cap there, and as you unscrew this it lifts the valve from its seat.

Q. 36. When the Bailey valve is fixed upon its seat and a pin passed through the stem & cap by means of the pin-hole, what is the effect on the automatic action of the valve?

A. It is no longer an automatic valve.

Q. 37. When the face of the Orr valve is screwed upon its seat what is the effect upon the automatic action of the valve?

A. None by itself; it is simply affected as it was before; it don't affect that part at all.

Q. 38. Could the automatic action of the Orr valve be stopped or prevented?

184 A. Not at all, unless that spring is completely compressed so that there is no elasticity—brought down solid.

Q. 39. Then what is used to stop the automatic action of the Orr valve?

A. There is nothing that I can see, unless it is an excessive strain upon a spring that it is not intended to strain.

Q. 40. I will ask you what portions of the Orr valve are used in preventing the automatic action of the valve?

A. This connection here, this sleeve; oh! that is all that could possibly do it.

Q. 41. And the spring?

A. And the spring.

Q. 42. I show you the spring of the Orr valve, & ask you whether, with that spring placed in its place in the valve, you could, by means

of that valve, press that spring into a state of solidity so as to prevent its automatic action?

A. You might if you were to run a fine thread on the outside here; but it could be done by putting levers on these arms R of the Orr valve.

185 Q. 43. Then, to do so, you would change the construction of the valve?

A. Yes, sir.

Q. 44. But as the valve is now constructed could that spring be compressed into a state of solidity?

A. It may be possible, but I doubt it.

Q. 45. I will ask you another question: When the Bailey valve is placed upon its seat and keyed by means of the pin through the pin-hole, is the piston & screw-cap attached in the same manner as when the valve is acting automatically?

A. Oo, sir; it is not.

Q. 46. When the face of the Orr valve is screwed down upon its seat, & the tension of the spring weighted to its utmost capacity, what chang', if any, is there in the attachment between the stem and screw-cap of the Orr valve?

A. None whatever.

Q. 47. What change, if any, is made at any time, for any purpose, in the attachment of the stem and screw-cap of the Orr valve?

A. None further than the working of it in and out as they open and shut it; but there is no change in the attachment.

186 Q. 48. What change, if any, is made in the Bailey valve to hold it immoveably upon its seat?

A. Putting a pin through that hole; through the hole of the screw-cap and stem.

Q. 49. Could you, after reading the second claim of the Bailey patent, hold the face of the Bailey valve upon its seat rigidly by means of the elements mentioned in the combination described in the second claim?

A. No, sir; I hardly think it; I don't see any pin mentioned here. I see a pin-hole, but I don't see any pin for holding it down.

Q. 50. Then, in order to accomplish that result, would require the addition of an element not mentioned in the combination required in the second claim?

A. Yes, sir; it would.

Q. 51. What effect or function does the spring of the Bailey valve perform when the face is held rigidly upon its seat by means of the key and pin-hole?

A. It don't perform any at all, sir.

187 Q. 52. The only manner in which the Orr valve could have its automatic action prevented would be by a compression of the spring, wouldn't it?

A. Yes, sir; or overloaded; that is all.

Q. 53. I will ask you to look at the drawings of the valves represented by Defendants' Exhibits E, F, G, & H. I call your attention, first, to Exhibit E, and ask you if you ever saw a valve constructed substantially as that shown by the drawing?

A. Yes, sir.

Q. 54. Is that an ordinary mechanical device?

A. Yes, sir.

Q. Prior to 1864?

A. Yes, sir, but not in that shape; that is the main thing there. Exhibit H, that is the same device.

Q. 56. In somewhat different form?

A. Yes, sir.

Q. 57. (By Mr. BOONE.) You say this exhibit was not used prior to 1864 in that shape?

A. I don't say it was not; my attention was not called to it.

188 Q. 58. (By Mr. PRESTON.) Defendants' Exhibit H you are familiar with?

A. Yes, sir.

Q. 59. For how long prior to 1864?

A. There was one directly under my charge for two or three years before that—two or three of them.

Q. 60. Could the face of that valve be held rigidly upon its seat?

A. Yes, sir; that can be done.

Q. 61. How?

A. By screwing the bridle A down upon the collar B of the stem.

Q. 62. That would prevent the automatic action of the valve?

A. Yes, sir; completely.

Q. 63. The result, then, would be precisely as that arrived at by the Bailey valve by the key-hole and pin?

A. Yes, sir.

Q. 64. I will ask you whether the insertion of a pin through a hole made in that screw-cap to prevent the valve lifting from its seat would have been a matter within the reach of the ordinary skill of any ordinary mechanic?

A. Well, yes, sir; I should think so.

189 Q. 65. A matter of ordinary mechanical skill?

A. Yes, sir; I should say so.

Q. 66. As a mechanic, would it have been anything new or novel to learn that passing a key through that pin-hole and stem would hold the valve on its seat and prevent its raising from the pressure?

A. I don't think a man would go crazy studying that out.

Q. 67. What do you mean by that?

A. What I mean is this, that it is the only way that I know of a man could accomplish that, and the simplest way—the first thing that would come into his head.

Q. 68. Supposing this Bailey valve had this screw-cap screwed down until the spring within the valve became solid, as you have described in the Orr valve, what would be the result?

A. It would accomplish the same thing as that pin.

Q. 69. Then, the weight of the spring of the Bailey valve would accomplish the same result as the weighting of the spring of the Orr valve?

A. Yes, sir.

190 Q. 70. Now, in the Bailey valve, you have said that screwing the cap of the Bailey down solid would weight the spring so that the automatic action of the valve would be prevented?

A. It might not be done; that one——

Q. 71. (Interrupting.) Give us the facilities, the power; could not something be placed on the screw-cap——

A. (Interrupting.) It might possibly be, but you have not got the thread cut down fine enough.

Q. 72. If the thread of the Bailey valve was cut down sufficiently far, and an arm or lever placed on the screw-cap, could the spring be weighted down so as to prevent the automatic action of the valve?

A. Yes, sir; you could screw that spring right together.

Q. 73. Then, this device, by first running the screw-thread down a little further, and placing an arm on the screw-cap to get the necessary power, you could have the spring weighted so as to prevent the automatic action of the valve?

191 A. It might be done; yes, sir; if the thread was cut far enough.

Q. 74. The reason would be, would it not, that the spring would be confined between the shoulder of the screw-cap and the collar of the valve?

A. Yes, sir.

Q. 75. And the screw-cap would be immoveable?

A. Yes, sir.

Q. 76. Beyond the action of the screw-thread itself?

A. Yes, sir.

Q. 77. And that is the reason why that result would follow?

A. That is the reason why that result would follow; if the spring were compressed it would be a solid mass of iron.

Q. 78. In the Orr valve would that same result follow by a compression of the spring, taking into consideration the fact that the valve itself, as a whole, has a play, and that the screw-cap and box of the valve plays entirely free from the fastening of the valve itself?

192 A. I don't know that that could be done. I don't think it could.

Q. 79. Let me call your attention to it in another shape. The screw-cap valve-shell of the Bailey valve when the cap is screwed down to compress the spring to a state of solidity is all rigid, is it not, so far as any play up and down is concerned?

A. Yes, sir.

Q. 80. The only action that can be had at all would be the turning of the screw-cap upon the thread of the screw?

A. Yes, sir.

Q. 81. Could the body of the Orr valve be fixed so that it would operate rigidly?

A. Yes; it can be compressed.

Q. 82. By having the proper mechanical facilities for compressing the spring into a state of solidity?

A. Yes, sir.

Q. 83. And that same mechanical result may be performed by the Bailey valve without the pin-hole or key?

A. Yes; it can.

193 Q. 84. Both valves would require to have the device enlarged or rendered more powerful, to enable them to perform that function?

A. I think so.

Q. 85. Did you ever see a combined automatic and relief stop-valve prior to 1864, or valves automatic in their action changed into a stop-valve?

A. I have, sir; it can be done; but it is not the handiest thing in the world.

Q. 86. In your experience as a practical machinist, do you know of any instance, prior to 1864, where it was necessary, at times, periodical or otherwise, to prevent the automatic action of a relief-valve; to hold its face rigidly on its seat?

A. Yes; many times.

Q. 87. What particular instance?

A. When they are testing boilers, and wedge down the safety-valves; that is about the only thing.

Q. 88. Did you hear Mr. Pardy's testimony?

A. Yes, sir.

Q. 89. In reference to a leak in the pipe where it might be necessary?

194 A. In my experience I never found that to be necessary, because it has open escape beyond that.

Q. 90. I will ask you whether the prevention of the automatic action of the relief-valve by wedging it, or putting a key through the stem, or adding additional weights to the arm where it was weighted—arm and weight instead of a spring—whether those were all matters which were within the knowledge of any ordinary mechanic?

A. Yes, sir; I suppose they are. If the valve had to be kept shut, of course a man would know enough to use the appliances to keep it shut.

Cross-examination of Wm. Deacon by Mr. BOONE:

Q. 1. Have you read the specification attached to the Bailey patent?

A. No, sir; except the claim.

Q. 2. Please read the specification. Read enough to see
195 whether, from the construction there given, you could make and operate a valve as given in that claim.

A. That can be operated.

Q. 3. You find the description very plain, do you?

A. Yes, sir; tolerably plain; that is, the manner of working it, as described here.

Q. 4. Then, taking the specification, in connection with the claim, you find no difficulty in operating the valve as intended, do you?

A. As a relief-valve it may be operated.

Q. 5. Did you ever see any of the valves represented by Exhibits E, F, G, & H applied to steam fire-engines between the pump-cylinder and the hose prior to 1864?

A. No, sir; I never did; not to a steam fire-engine.

Q. 6. What is the character of the valves represented by those exhibits?

A. Relief-valves—automatic relief.

Q. 7. Commonly known as safety-valves?

A. Yes, sir; that is what they all are.

Q. 8. Is it the practice to construct an ordinary safety-valve with reference to converting it into a stop-valve?

196 A. No, sir; it is not.

Q. 9. Prior to 1864, do you know of any instance in which either of those valves was used as a stop-valve as well as an automatic valve?

A. Yes, sir.

Q. 10. Where?

A. In testing boilers on steamers.

Q. 11. What means were used to tell what the pressure was in the boiler when that valve was weighted down—fastened down?

A. In some instances columns of mercury, and in other cases an ordinary steam-gauge that the boilers were run by; that they regulate the pressure upon the boiler by. It was merely in testing the boiler where using hydrostatic pressure—hydrostatic pressure.

Q. 12. It was not used as a stop-valve when the boiler was in operation in furnishing steam to the engine?

A. No, sir; not then very often; sometimes it was.

Q. 13. Did you ever see it used in that way when the engine was running?

A. I wouldn't like to say as an engineer.

Q. 14. These are both relief-valves, are they not; the Orr and Bailey valves?

A. Yes, sir.

Q. 15. Both applied in the same relation to the fire-engine, are they not?

A. They can be, but not used in the same place; but they cannot be used in the same place.

Q. 16. The object of the two valves is the same?

A. The object the same.

Q. 17. The operation of the two is the same as far as results are concerned?

A. Yes, sir.

Q. 18. The difference is in the mechanical construction of the one as being different from the other?

A. Yes, sir.

Q. 19. But they both arrive at the same result in the end?

A. As long as the Bailey valve is left automatic it is.

Q. 20. Don't they, so far as they act as a stop-valve, both act as a stop-valve when properly adjusted for that purpose?

A. Yes, sir; they both act as a stop-valve. I think if the Orr valve was arranged to make a stop-valve of it, it would make as good a stop-valve as the Bailey; but otherwise it would not.

Q. 21. But still it can be made a stop-valve?

A. It is capable of being made a stop-valve.

Q. 22. Its construction admits of its being made into a stop-valve?

A. As it is now it does not.

Q. 23. Do I understand you to say that as the valve is constructed (Exhibit I) it could not be made into a stop-valve?

A. I hardly think it could, for I have not tested it. If these threads were cut far enough, and I could get power enough, I could make it a stop-valve.

Q. 24. All you have to do is to condense that spring?

A. Yes, sir; all you have to do is to condense that spring.

Q. 25. When it is sufficiently condensed it becomes practically a stop-valve?

A. Yes, sir.

Q. 26. When the spring is condensed sufficiently to resist the pressure in the pipe, then it is a stop-valve?

A. No, sir; when that spring is sufficiently condensed to become a solid mass of metal then it is a stop-valve. They are a stop-valve when they shut.

Redirect-examination of Wm. Deacon by Mr. PRESTON:

Q. 1. The functions which these valves perform on steam fire-engines are not different from any other relief-valves that could be placed there?

A. No; certainly not. It is nearly all connection with the pumps that valves of that character are used, and the reason they use a spring on it is there is no elasticity in water, and if there was weight on it, and it acted as a relief-valve, it would make this thing jump and break. For that reason a spring is used.

Q. 2. Any of those valves are well-known common mechanical devices and will operate and perform the same functions?

A. Yes, sir.

Q. 3. They weight the valve so as to be the same as the spring-valve in this relation?

A. It would not be as safe as a spring-valve with that device.

Q. 4. But every automatic relief-valve acting automatically commences upon its seat as a stop-valve?

A. Yes, sir; while it is on its seat it is a stop-valve.

Q. 5. And the only reason why it is called automatic is, when the pressure upon the face of the valve overcomes the tension of the spring it lifts?

201 A. Yes, sir.

Q. 6. It drops back to its seat and becomes a stop-valve when the pressure decreases below the tension of the spring?

A. Yes, sir.

Q. 7. I understand you to say that all these automatic relief-valves are used in the case of pumps, either steam or water?

A. It is most always on water engines; it is on the water end that it is used.

Q. 8 (Mr. BOONE.) Takes off relief pressure of the cylinder?

A. Yes, sir.

Continued until Tuesday, July 6, 1880, at 2 o'clock p. m.

202 *John M. Stockman.*

TUESDAY, *July* 6, 1880.

Present, Mr. Boone, of counsel for complainant; Mr. Preston, of counsel for defendant.

JOHN M. STOCKMAN, heretofore sworn on behalf of the plaintiff, recalled for the defendant, testified as follows:

By Mr. PRESTON:

Q. 1. Mr. Stockman, what is your business?

A. I am a pattern maker and draughtsman.

Q. 2. Are you familiar with the construction and operation of relief-valves?

A. Yes, sir; to some extent.

Q. 3. For how long?

A. Well, I suppose perhaps 15 or 16 years; 15 years.

Q. 4. Are you familiar with the mechanical device—the operation of an automatic relief-valve by means of a spring to overcome the pressure of the valve?

A. Yes.

203 Q. 5. Have you seen any number of those valves?

A. I have seen them used a number of times; yes, sir.

Q. 6. How far back?

A. Well, I have seen springs applied to a safety-valve as much as 16 or 17 years ago; more, perhaps; as much as that.

Q. 7. Was your attention called to those valves in isolated instances, or were they in general use as a common mechanical device?

A. Well, I have seen them in use more than once; I do not know that my attention was called particularly to any particular one; but I have a spring used as a relief.

Q. 8. In general use?

A. Well, I do not know what you call a general use; it was a frequent thing.

Q. 9. A frequent thing?

A. Yes, sir.

Q. 10. As far back as 15 or 16 years ago?

A. Yes, sir.

204 Q. 11. Are those valves capable of being used as stop-valves, or the automatic action of the valve itself prevented entirely?

A. Yes; they might be used in that way, by either screwing down the spring, or any appliance that would effect that; different appliances. I have seen them used that way.

Q. 12. The result of screwing down the spring, or the different appliances you speak of, the effect was to hold the valve firm upon its seat?

A. Yes, sir; the compression of the spring might be such that it would overcome the pressure that was applied to the face of the valve.

Q. 13. Did you see those exhibits that were presented to the witness Pardy last Saturday?

A. Well, I saw them here in court; but only in a general way.

Q. 14. Did you examine them sufficiently to acquaint yourself with the mechanical construction of the valves delineated there?

205 A. I would prefer to see them before testifying.

By Mr. BOONE:

Q. 15. You say, Mr. Stockman, your knowledge of these things extends back 16 or 17 years?

A. I think so.

Q. 16. That would take it back to 1863 or 1864?

A. I think so.

Q. 17. Not back of that time?

A. I think I might safely say I have seen the relief applied to safety-valves before that time. I think I saw it in Boston before I came to California.

Q. 18. On a boiler?

A. Yes, sir.

Q. 19. You never saw one applied to a steam fire-engine, did you?

A. No, sir; I never did.

Q. 20. Prior to 1863 had you seen steam-boiler safety-valves converted into a stop-valve?

A. Well, in the way I explained to you, by fastening the valve down.

Q. 21. For what purpose?

206 A. For the purpose of testing a boiler.

Q. 22. Of getting up a greater pressure in the boiler?

A. Yes, sir.

Q. 23. Was it done while the boiler was working or merely before the boiler was put in use for the purpose of testing its strength?

A. It was a hydrostatic test, before the boiler was used.

Q. 24. It was not used for a stop-valve while the boiler was in use, was it?

A. No, sir.

Q. 25. Running an engine?

A. No, sir.

Q. 26. Simply to test the boiler, preliminary to use, to see whether it would stand?

A. It was this: Of course every boiler is supposed to be supplied with a safety-valve. In testing it, it is necessary to have the valve fastened on the seat. What I have seen done by wedging it down, instead of using a weight, or putting the weight further out on the beam; simply wedge it down.

207 Q. 27. This is done before the boiler is put into use?
A. Yes, sir.
Q. 28. Simply to test the pressure the boiler will stand, or its capacity?
A. Yes, sir.
Q. 29. After it was put in use, and while it was in regular use, did you ever see them used in that way?
A. No, sir; I never did; not while in use.
Mr. PRESTON. I now want to offer in evidence a copy of the U. S. letters patent No. 150945, granted to Gilbert J. Orr, May 19, 1874, which we will have marked Defendants' Exhibit J.
And it is hereby stipulated by and between counsel that the exhibit is a true copy of said letters patent, and that it is introduced with the same force and effect as if it were the original.

208 I further certify that the said depositions were, by agreement of counsel for the respective parties in said cause, taken down in shorthand, and afterwards transcribed into their present form, and that the reading of the said depositions to said witnesses, and the signing thereof by them, respectively are waived; and I have retained said depositions in my possession for the purpose of presenting the same with my own hand to the court for which they were taken.
And I do further certify that I am not attorney nor of counsel for either or any of the parties to said action, nor in any way interested in the event of said cause.
In testimony whereof I have hereunto set my hand this 12th day of July, A. D. 1880.

JOS. F. O'BEIRNE,
Examiner, &c.

209 In the United States circuit court, district of California, ninth circuit.

CHARLES E. BLAKE, COMPLAINANT,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO et al., respondents.
} In equity. Petition for rehearing.

To E. F. PRESTON,
Solicitor for Respondent:

Please take notice that at 11 o'clock, a. m., on Monday, Oct. 4th, 1880, or as soon thereafter as counsel can be heard, the complainant in the above-entitled case will move the honorable court at the court-room of the United States circuit court, on Washington and Sansome streets, in the City and County of San Francisco, for a rehearing of said cause. Said motion will be based upon the files and papers in said cause, now in possession of the clerk of said court, and upon the affidavits of Eugene Moreau and William Birch, copies of which are herewith served.

210 The special matter or cause on which said rehearing is applied for is, that the invention covered by the second claim in complainant's patent was not fully considered and understood by the court on the trial of said cause. That the failure to properly established the points of said claim was not the result of negligence or want of diligence on the part of complainant, but was occasioned by the unavoidable absence of complainant's attorney. That complainant has dis-

covered new evidence that will establish the infringement by the respondents upon the second claim of said patent.

JOHN L. BOONE,
Solicitor for Complainant.

CITY AND COUNTY OF SAN FRANCISCO,
State of California:

Charles E. Blake, being duly sworn, deposes and says that he is the complainant in the above-entitled cause. That he has heard the petition above written read, and that the facts therein stated are true to the best of his knowledge and belief.

CHARLES E. BLAKE, SR.

211 Sworn to and subscribed before me this 25th day of September, 1880.

[SEAL.] J. H. BLOOD,
Notary Public in and for the City and County of San Francisco, California.

(Endorsed:) Service and receipt of a true copy thereof admitted the 25th day of September, 1880, reserving all exceptions that notice comes too late.

COWDERY & PRESTON,
Att'y for Respondents.

Filed 25' Sept., 1880. L. S. B. Sawyer, clerk, by J. F. O'Beirne, dep'y cl'k.

212,213 *Petition for rehearing.*

In the United States circuit court, in and for the district of California.
ninth circuit.

CHARLES E. BLAKE, COMPLAINANT,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO et al., respondents. } Petition for rehearing.

To the honorable the justices of the United States circuit court, in and for the district of California:

The petition of Charles E. Blake, complainant, shows unto your honors that the decision heretofore rendered by your honors in the above entitled cause, as far as the same relates to the second claim in complainant's letters patent, was rendered without a thorough understanding thereof by the court. That complainant's principal attorney was absent from the State when the court compared the two machines, and no thorough explanation of the operation of defendants' ma-
214 chine was made to the court.

The second claim in complainant's letters patent reads as follows:

"The combination of the valve C, stem *d*, spring E, adjustable cap D, and pin-hole *d*, whereby the valve may be either held upon its seat with a variable yielding pressure, or may be elevated therefrom, or held immovably thereon, as an ordinary screw plug.

Bailey therefore claims a valve in which three purposes are accomplished.

First. It must be automatic, that is, it must be held upon its seat with a variable yielding pressure, as it is stated in the claim.

Second. It must be so arranged that it can be converted into an open valve as when the valve is elevated from its seat; and

Third. It must be capable of being converted into a plug-valve, as when the valve is held immovably on its seat.

Bailey's valve does all three of these things. When the pin is out and the spindle works freely through the cap the spring holds the valve down, and a pressure on its underside greater than the tension
215 of the spring opens it. Then it is automatic. Screw down the cap and put the pin in the pin-hole, and the spring is thrown out of action, so that the valve is fastened down upon its seat, and thus converted into a plug-valve. Now, while the pin is in the pin-hole, if we unscrew the cap, so as to turn it upward, the valve is lifted off its seat and held permanently open.

Now, let us look at the Orr valve. In this valve the spring is compressed upwards. Its upper end bears against a fixed surface, and the case is made in two halves, which are drawn together by a right and left hand screw on an intermediate sleeve, in order to compress the spring. By turning this sleeve in one direction, the spring is compressed just like the Bailey valve spring is compressed when the cap is turned down.

When the spring is in action, the valve is automatic, just like the Bailey.

When the intermediate sleeve is turned, so as to draw the two parts of the case together, the spring is condensed and thrown out of action, just as the spring throws the Bailey spring out of action. In this condition, if the spindle be turned down, the valve is fixed upon its
216 seat, just as the Bailey valve is fixed to make a stop-valve. Now, if we turn the spindle backward, just as we turn the Bailey cap backward, the valve is raised from its seat and held open, just as the Bailey valve is held open.

Thus we see that the Orr valve has precisely the same three adjustments that the Bailey valve has, and precisely the same three that the second claim covers. The pin throws the Bailey spring out of action. The sleeve, with its right and left hand screw, throws the Orr spring out of action; hence they are the equivalents of each other.

When the spring is thrown out of action in the Bailey valve, the screw-cap serves to raise and lower the valve, so as to hold it permanently closed or permanently open. When the spring in the Orr valve is thrown out of action, the screw in the spindle serves to raise and lower the valve so as to hold it permanently closed or permanently open; hence the screw-spindle is the equivalent of the screw-cap.

Neither of the exhibits are adapted to accomplish these three
217 things. By a stretch of imagination we can make either of the exhibits do two of the things; that is, perform two of the offices above mentioned; that is, they are automatic, and they can be plugged down, but they are not adapted to be held permanently open. They are automatic in their action, and thus far they are equivalent to the Bailey and Orr when they are automatic. They can be converted into plug-valves by inserting a wedge or plug so as to plug them down. The result of converting them into stop-valves is accomplished without doubt, but not by any means or device that form a part of the valve itself. A wagon-brake serves to prevent the wheels of a wagon from rotating when it is applied to the rim of the wheel. A stone or block of wood inserted under the wheel so as to chock it will do the same thing;

but no one would think of trying to anticipate a wagon-brake by referring to a chock. The cases are precisely equivalent.

But neither of these exhibits admit of the valve being raised so as to be held permanently open.

218 In the Bailey and Orr valves all three of these conditions or functions are performed by mechanism that forms a part of the valve, and this mechanism is just what the second claim of the Bailey patent covers.

In its consideration of the case the court held that the Orr valve was always automatic. This is not true as a matter of fact. It is admitted that the tension of the spring in the Orr valve is adjustable; that is, its tension can be regulated to resist a greater or a less pressure. Now, if it can be thus adjusted, what is to prevent the adjustment being carried to such extent as to be sufficient to overcome any pressure that the valve is subject to? If it is adjustable at all, it is then simply a question of degree.

Why does Orr cause a sleeve with right and left hand screw? The answer is to enable him to compress the spring.

Question. Why does he want to compress the spring?

Answer. "To regulate its tension, and if sufficiently compressed,

219 to throw it out of action."

Q. Why does he want to throw it out of action?

A. "To enable him to hold the valve permanently on its seat or hold it permanently open."

The pin and pin-hole in the Bailey valve are for the same purpose. These devices are, therefore, the equivalent of each other. Your petitioner, therefore, submits that the decision heretofore rendered in this case is error, and he respectfully asks for a rehearing of the cause, so far as the same relates to the second claim in the patent.

JNO. L. BOONE,
Solicitor for Complainant.

CITY AND COUNTY OF SAN FRANCISCO,
State of California, ss:

Charles E. Blake, being duly sworn, doth depose and say that he is complainant in the above-entitled action; that he has heard read the foregoing petition for a rehearing; that the matters therein stated

220 are true of his own knowledge, except as to those matters which are stated on information and belief, and as to those matters he believes it to be true.

CHAS. E. BLAKE.

Subscribed and sworn to before me this 13th day of October, A. D. 1880.

[SEAL.] GEO. T. KNOX,
Notary Public.

(Endorsed:)

Without waiving any objections, receipt of a copy of within petition for rehearing admitted this 14th day of October, 1880.

COWDERY & PRESTON,
Attorney for Resp'ts.

Filed 14' Oct. 1880. L. S. B. Sawyer, cl'k, by J. F. O'Beirne, dep'y cl'k.

221 *Complainant's Exhibit A.*

No. 7886.—Reissue.

The United States of America to all to whom these presents shall come:

Whereas Charles E. Blake, of San Francisco, California, assignee of Bridget Wallace, administratrix of Thomas H. Bailey, deceased, said assignee having presented to the Commissioner of Patents a petition praying for the reissue of letters patent for an alleged new and useful improvement in relief-valves for water-cylinders, for which letters patent were issued to said Thomas H. Bailey, dated February 9, 1864, which letters having been surrendered the same have been canceled, and new letters ordered to issue to said Charles E. Blake on an amended specification, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said
222 Charles E. Blake, his heirs or assigns, for the term of seventeen years from the ninth day of February, one thousand eight hundred and sixty-four, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this eighteenth day of September, in the year of our Lord one thousand eight hundred and seventy-seven, and of the Independence of the United States of America the one hundred and second.

A. BELL,
Acting Secretary of the Interior.

Countersigned:
[SEAL.]

ELLIS SPEAR,
Commissioner of Patents.

(Here follows diagram, marked page 223.)

223 UNITED STATES PATENT OFFICE.

Charles E. Blake, of San Francisco, Cal., assignee of Bridget Wallace, administratrix of Thomas H. Bailey, deceased. Improvement in relief-valves for water-cylinders. Specification forming part of letters patent No. 41471, dated February 9, 1864; reissue No. 7886, dated September 18, 1877; application filed May 11, 1877.

To all whom it may concern:

Be it known that Thomas H. Bailey, deceased, did invent a new and improved valve for water-cylinders of steam fire-engines and other pump-cylinders, of which the following is a full and complete description:

Previous to this invention the only valve employed for relieving the pressure upon fire-hose to prevent it from bursting in case the water-passage through the hose should become obstructed, or in case of ex-

cessive pressure from the engine, was one operated by hand. This valve, however, was ineffectual unless the engineer, or other person whose duty it was to open and close the valve, had previous no-
224 tice that the pressure was increasing or had increased, and as these emergencies are always liable to occur instantaneously without previous notice the hose would often be bursted before the relief-valve was operated; and, besides this, the excitement which always prevails at a fire renders a strict attention to this valve almost impossible.

Thomas H. Bailey, however, remedied all these difficulties by applying a valve at some point between the engine or pump and hose-nozzle that is automatic in its action—that is, it is opened by any excess of pressure in the hose or pump-cylinder so as to discharge an additional stream and thereby relieve the inside pressure correspondingly. The valve is kept upon its seat by a spring, and it will therefore resist a pressure corresponding to the power of the spring, so that ordinarily it remains closed; but in case the pressure in the hose should be increased by any means so as to overcome the tension of the spring and threaten to burst the hose the spring will yield and allow the valve to open and relieve the pressure.

Referring to the accompanying drawings, Figure 1 is a central
225 vertical sectional view of the valve. Fig. 2 is a central vertical sectional view on a smaller scale, showing the attachments of the valve to a pump-cylinder.

A is a casing, like that of an ordinary globe-valve, attached by a screw-thread, *a*, to a suitable opening provided in the pump-cylinder F, between the said cylinder and the hose or pipe connections. B is a hollow cylinder, screwed into the top of the said casing, and coming to a bearing on the top of the casing and into contact with a surface surrounding the valve-seat *b*, but having an opening, *c*, at the bottom, towards the outlet opening of the casing. C is the valve, having a conical face, *f*, ground to fit the seat *b*, and having its upper part made in the form of a piston and packed with leather or other soft material *g*, to fit water-tight within the cylinder B.

This valve has a stem, *d*, which fits to an opening in an adjustable screw-cap, D, which is screwed on to the top of the cylinder B. E is a spiral spring surrounding the valve-stem, between the top of the valve and the crown of the screw-cap D, and adjusted by screwing down
226 the said cap to make it produce a greater or less pressure upon the upper side of the valve, so that a greater or less pressure may be required upon its under side to open it. *e* is a vent-hole in the cylinder B, above the valve, to provide for the escape from the said cylinder of any water that may pass above the valve. G G, Fig. 2, are two hose or pipe connections, one of which may be closed by the single cock H, leaving the other open. Separate cocks may be used for the two pipe connections.

The spring E is intended to be so adjusted that when the hose or pipe connections are both or all open it will exert pressure enough upon the valve to keep it closed, but that, when one or both of the said connections are closed, the extra pressure upon the pump and hose or pipe, acting upon the lower surface of the valve, may raise it, and provide for a suitable escape of water through the outlet *h* of the casing A, and so relieve the pump and hose or pipes.

The construction of the upper part of the valve to fit the cylinder B like a piston is intended to prevent any accumulation of water within the said cylinder above the valve which would interfere with the

227 free opening of the valve; and in case of any water passing the piston by reason of defective packing, it will escape by the vent *e*.

To enable the valve to be screwed down to bring all practical pressure upon the pump and hose in a trial of an engine, there is a hole, *d'*, drilled through the upper part of the screw-cap D and valve-stem *d* when the valve is down in its seat for the reception of a pin, by the insertion of which the valve-stem and cap can be connected rigidly, so that by slightly turning the cap the valve may be screwed down close to its seat.

A spring-valve can be variously applied to different parts of a pump or hose for the same purpose; but the above description is sufficient to illustrate the essential features.

Having thus described the invention of the said Thomas H. Bailey, deceased, what I claim, and desire to secure by letters patent as sole assignee of said patent, is:

1. The combination, with a pump-cylinder and hose of a fire-engine, of an automatic relief-valve, arranged relatively thereto, sub-
228 stantially as specified.

2. The combination of the valve C, stem *d'*, spring E, adjustable cap D, and pin-hole *d*, whereby the valve may be either held upon its seat with a variable yielding pressure, or may be elevated therefrom, or held immovably thereon, as an ordinary screw-plug.

CHARLES E. BLAKE,
Assignee.

Witnesses:
O. T. STACY.
F. A. BROOKS.

229 *Complainant's Exhibit B.*

STATE OF NEW YORK,
County of Rensselaer, Surrogate's Court:

I, Moses Warren, surrogate of said county, do hereby certify that on the 8th day of March, 1877, Bridget Wallace was appointed the administratrix of all and singular the goods, chattels, and credits of Thomas H. Bailey, late of the city of Troy, N. Y., in said county, and that special letters of administration have been issued to the said Bridget Wallace in due form of law, she having first taken and subscribed the oath prescribed by law as such administratrix.

In testimony whereof I have hereunto subscribed my name and affixed my official seal, this 14th day of March, 1877.

[SEAL.] MOSES WARREN,
Surrogate.

Whereas letters patent bearing date the ninth day of February, A. D. 1864, were granted and issued by the Government of the United States, under the seal thereof, to Thomas H. Bailey, of Troy, N. Y., for an improvement in relief-valves for water-cylinders, a more full & particular description whereof is annexed to the said letters
230 patent, in a schedule, by which letters patent (No. 41471) the full and exclusive right and liberty of making & using the said invention, and of vending the same to others to be used, was granted to the said Thomas H. Bailey, his heirs, executors, administrators, and assigns, for the term of seventeen years from the date thereof.

Now, therefore, this indenture witnesseth: That I, Bridget Wallace,

as administratrix of all and singular the goods, chattels, and credits of the said Thomas H. Bailey, deceased, for and in consideration of the sum of two hundred dollars, to me in hand paid by Charles E. Blake, sr., of San Francisco, California, the receipt whereof is hereby acknowledged, have granted, bargained, sold, and set over, and by these presents do grant, bargain, sell, and set over, unto the said Charles E. Blake, sr., his executors, administrators, and assigns, the said letters patent, and all my right, title, and interest, as such administratrix, and all the right, title, and interest which the said Thomas H. Bailey had in and to said letters patent at the time of his decease, to have and to hold the said letters patent and inventions unto the said Charles
231 E. Blake, sr., his executors, administrators, and assigns, in as full and ample a manner, to all intents and purposes, as the said Thomas H. Bailey might have or hold the same were he now living, and as I might have or hold the same were these presents not made, for and during the rest and residue of the said term of seventeen years.

In witness whereof I have hereunto set my hand and seal as administratrix as aforesaid, this 15th day of March, 1877

BRIDGET WALLACE. [SEAL.]
Adm'x.

In presence of—
ROB'T H. MCCLELLAN.
JAMES LANSING.

Word "sr." interlined after "Blake" before execution.
H. B. STOUGHTON.

STATE OF NEW YORK,
Rensselaer County, ss:

On this 15th day of March, 1877, before me, personally came Bridget Wallace, known to me to be the administratrix of the goods, chattels, and credits of Thomas H. Bailey, mentioned and described in the within assignment, and the said Bridget Wallace acknowledged before
232 me that she executed the same as such administratrix as aforesaid.

ROB'T H. MCCLELLAN,
Com'r of Deeds, Troy, N. Y.

STATE OF NEW YORK,
City of Troy, Rensselaer County, ss:

CLERK'S OFFICE.

I, Eben C. Reynolds, clerk of the said county, and also clerk of the supreme and county courts, being courts of record held therein, do hereby certify that Robert H. McClellan, whose name is subscribed to the certificate of proof or acknowledgment of the annexed instrument, was, at the time of taking such proof or acknowledgment, a commissioner of deeds of, in, and for the city of Troy, dwelling in said city, and duly authorized to take the same; that I am well acquainted with the handwriting of the said commissioner, and verily believe that his signature to the said certificate of proof or acknowledgment is genuine, & that said instrument is executed & acknowledged according to the laws of the State of New York.

In testimony whereof I have hereunto set my hand & affixed the seal of said county this 15th day of March, A. D. 1877.

[SEAL.] E. C. REYNOLDS, *Clerk.*

(Endorsed:) Received for record May 11, 1877, & recorded in liber M 21, page 457, of transfer of patents.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

Ex'd: MELDRUM.

233 *Complainant's Exhibit C.*

No. 4290.]

U. S. PATENT OFFICE, *Aug.* 31, 1877.

Before the examiners-in-chief on appeal. Application of Charles E. Blake for a reissue of letters patent No. 41471, dated February 9, 1864, "relief-valves for water-cylinders."

The rejected claim is as follows:

"1st. The combination with a pump-cylinder and hose of a fire-engine of an automatic relief-valve arranged relatively thereto, substantially as specified."

The use of safety-valves, safety-springs, safety-pins, &c., is known and common in a thousand relations where it is important to provide against rupture of parts by the overstrain of the power employed.

Applicant claims that he, being the first to successfully apply this common device to a fire-engine, is entitled to cover it broadly.

It seems, from the statements of applicant and admissions of the examiner, that heretofore the only relief for the hose from pressure
234 when the water was cut off by the person holding the nozzle was by a valve under the control of the engineer and operated by hand.

Consequently there was great liability to rupture the hose whenever the nozzle was being played at a great distance from the engine, and the water was suddenly turned off without being able to communicate the fact immediately to the engineer.

The great advantages following the new combination of the automatic relief-valve with the apparatus is evident and admitted.

This improved result, in not only saving the bursting of the hose, but in greatly facilitating the rapid and successful working of these very important machines, affords ground for sustaining the claim of invention.

But to this is added the thought and labor to construct and adapt a suitable device for the new combination and use.

For this device the office has adjudged him a patent; and a claim is again allowed on this reissue application.

The device of Grant referred to could be used in this combination, but it would be unwieldy and hardly practicable. Applicant
235 being the first to apply the automatic safety principle to steam fire-engines, so long known and yet so defective for the want of this very improvement, it seems obvious that some obstacle had to be overcome to secure this much-needed addition, and that the case presents something beyond a mere double use.

We must reverse the decision.

R. L. B. CLARKE,
V. D. SHORTBRIDGE,
H. H. BATES,
Examiners-in-Chief.

Ex'd: H. M. H., c'k.

236 *Def'ts' Exhibit B.*

(65.)

DEPARTMENT OF THE INTERIOR.

United States Patent Office, to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Thomas H. Bailey February 9th, 1864, No. 41471, for improvement in relief-valves for water-cylinders.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-fifth day of March, in the year of our Lord one thousand eight hundred and seventy-nine, and of the Independence of the United States the one hundred and third.

[SEAL.]

W. H. DOOLITTLE,
Acting Commissioner.

237 No. 41471.

United States of America, to all to whom these presents shall come:

Whereas Thomas H. Bailey, of Troy, New York, has alleged that he has invented a new and useful improvement in relief-valves for water-cylinders, which he states has not been known or used before his application, has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are, therefore, to grant, according to law, to the said Thomas H. Bailey, his heirs, administrators, or assigns, for the term of seventeen years from the ninth day of February, one thousand eight hundred and sixty-four, the full and exclusive right and liberty of
238 making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Thomas H. Bailey in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this ninth day of February, in the year of our Lord one thousand eight hundred and sixty-four, and of the Independence of the United States of America the eighty-eighth.

J. P. USHER,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

[SEAL.]

D. P. HOLLOWAY,
Commissioner of Patents.

239 The schedule referred to in these letters patent and making part of the same.

To all whom it may concern:

Be it known that I, Thomas H. Bailey, of Troy, in the county of Rensselaer and State of New York, have invented a new and improved valve for the water-cylinders of steam fire-engines and other pump-cylinders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a central vertical sectional view of the valve, full size.

Figure 2 is a central vertical sectional view on a smaller scale, showing the attachment of the valve to a pump-cylinder.

Similar letters of reference indicate corresponding parts in both figures.

To enable others to make and apply my invention I will proceed to describe its construction and operation.

A is a casing like that of an ordinary globe valve attached by
240 a screw-thread, *a*, to a suitable opening provided in the pump-cylinder F, between the said cylinder and the hose or pipe connections. B is a hollow cylinder screwed into the top of the said casing, and coming to a bearing on the top of the casing and into contact with a surface surrounding the valve-seat *b*, but having an opening, *c*, at the bottom toward the outlet opening of the casing. C is the valve, having a conical face, *f*, ground to fit the seat *b*, and having its upper part made in the form of a piston and packed with leather or other soft malerial *g*, to fit water-tight within the cylinder B. This valve has a stem, *d*, which fits to an opening in an adjustable screw-cap D, which is screwed on to the top of the cylinder B; E is a spiral spring surrounding the valve-stem between the top of the valve and the crown of the screw-cap D, and adjusted by screwing down the said cap to make it produce a greater or less pressure upon the upper side of the valve, so that a greater or less pressure may be required upon its under side to open it; *e* is a vent hole in the cylinder B, above the valve to
241 provide for the escape from the said cylinder of any water that may pass above the valve G G.

Figure 2 are two hose or pipe connections, one of which may be closed by the single cock H, leaving the other open. Separate cocks may be used for the two pipe connections.

The spring E is intended to be so adjusted that when the hose or pipe connections are both or all open it will exert pressure enough upon the valve to keep it closed, but that when one or both of the said connections are closed the extra pressure upon pump and hose, or pipe, acting upon the lower surface of the valve, may raise it and provide for a suitable escape of water through the outlet *h* of the casing A, and so relieve the pump and hose, or pipes.

The construction of the upper part of the valve to fit the cylinder B, like a piston, is intended to prevent any accumulation of water within the said cylinder above the valve, which would interfere with the free opening of the valve, and in case of any water passing the piston by reason of defective packing it will escape by the vent *e*.

To enable the valve to be screwed down to bring all practical
242 pressure upon the pump and hose in a trial of an engine, there is a hole, *d'*, drilled through the upper part of the screw-cap D and valve-stem *d*, when the valve is down in its seat for the reception of a pin, by the insertion of which the valve-stem and cap can be connected

rigidly, so that by slightly turning the cap the valve may be screwed down close to its seat.

I do not claim broadly the invention or use of spring pistons or valves; but

What I claim as my invention, and desire to secure by letters patent, is—

The combination of the valve C, stem *d*, spring E, adjustable cap D, and pin-hole *d'*, whereby the valve may be either held upon its seat with a variable yielding pressure or may be elevated therefrom or held immovably thereon, as an ordinary screw-plug.

THOMAS H. BAILEY.

Witnesses:
MARTIN MILLIGAN.
WM. ARCHBOLD.

Ex'd: F. F. L. M.

243 (Here follows diagram marked page 243.)

244 *Def'ts Exhibit C.*

In the circuit court of the United States in and for the ninth judicial circuit, district of California.

CHARLES E. BLAKE, COMPLAINANT,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO, a corporation; David Scannell, A. J. Bryant, G. E. Sloss, Gus. Reis, Edmond Flaherty, Peter Hopkins, and Charles Field, defendants.

Copy of matter relevant to the issue taken from printed publications as herein named.

EXHIBIT A.—Being an extract from patent of William George Armstrong, to be found in vol. 502 of British Patent Reports, of the year 1846, published in 1856, by Geo. Ed. Eyre and Wm. Spottiswoode, of London, England, the said patent being for a hydraulic crane, and numbered 11319, in words as follows:

"U V are two valves, which I call relief-valves, and which I
245 fix one upon each of the pipes R R and S S of the cylinder M. The object of these relief-valves is to prevent the circular motion of the jib being too suddenly arrested by the closing of the slide-valve in the box T, which regulates the admission and emission of the water to and from the cylinder M, and will be better understood by reference to Fig. 3 (sheet 1), which is a sectional view of one of the relief-valves V, representing a portion of one of the pipes or waterways S, upon which the relief-valves are fixed; *d* is a small pipe communicating with the main supply pipe D, and *l* is a small pipe communicating with the waste-pipe L, and a small cistern W, which is kept charged by the waste-water from the cylinders A and M.

"In these relief-valves there are clacks each opening upwards, as is represented at Figure 3, which figure, showing the relief-valve U in section, I will now proceed to describe:

"S S is part of one of the feed-pipes leading from the slide-valve box T to the cylinder M. *d* is a small pipe from the bottom of the relief-valve to the waste-pipe L and cistern W.

246 "The two clacks are lettered X and Y, and both open upwards The manner in which these relief-valves act may be described as follows: Suppose the jib of the crane to be swinging around by the action of the water upon the piston of the cylinder M, and suppose the pipe S to be acting for the time being as the egress-passage of the cylinder M, then on the sudden closing of the slide-valve in the box T the water on the egress side of the piston, being deprived of its outlet, would suddenly stop the progress of the piston, subject the whole turning apparatus to a violent shock from the momentum of the jib were it not for the clack X, which then gives vent to the confined water, and allows it to return into the main supply-pipe, D, as soon as the compression caused by the momentum of the jib becomes sufficient to raise the valve against the resistance or weight of water operating on its upper side, and thus the piston, instead of being suddenly stopped, is only powerfully retarded, and the jib is brought to rest quickly, but without a shock." (See Fig. 3, sheet 1.)

247 EXHIBIT B.—Being a further extract from the same patent as above.

"Figure 8 (sheet 2) is a species of safety-valve which may be placed on the main supply-pipe D, to prevent its bursting by the sudden increase of pressure which is liable to take place in the pipe when the flow of water through it is from any cause abruptly stopped, the power of the water operating on the piston F overcomes the resistance of spiral spring attached to the lever *p*, and opens for a moment the escape-cock *q*, which relieves the strain upon the pipe." (See Fig. 8, sheet 2.)

EXHIBIT C.—Being an extract from Practical Mechanics' Journal, vol. 7, n. s., pages 155–'6, published by Longman, Green, Longman and Roberts, London, England, and Glasgow, Scotland, Sept. 1st, 1862:

"*Extract.*—The floating steam fire-engines built by Messrs. Merryweather and Son for service on the river Tyne for the protection of the various docks, wharves, &c., in and around Newcastle, are fixed

248 in the tug boats plying on that river. This method of fixing steam fire-engines in tug boats is very advantageous, as beyond the first cost of the engine very little after expense is incurred.

"These engines are fixed in the fore part of the vessel, and supplied from the usual boilers. The tug always having steam up ready for shipping emergencies entails no further expense than usual for fuel or attendance, and is always ready at a moment's notice.

"One of these engines was made for the North Eastern Railway Company, by order of John Bourne, esq., their engineer.

"The following is a brief description of these engines, shown in perspective elevation, p. 155. Each engine is mounted on a base-plate; occupying a space of 8 ft. by 2 ft. 6 in. on the base-plate are fixed two inclined steam-cylinders, each 16 in. diam., with 12 in. stroke, on the trunk principle, working on to one crank-shaft at the apex of an A-shaped frame. Immediately beneath the crank-shaft, and worked by it, is the fire-engine, consisting of two 9-in. single acting pumps, with 10-in. strokes; the valves, pumps, and valve-boxes are of gun-metal; covers are provided for easy access to the valves.

249 "The engine is surmounted by a capacious copper air vessel, with two delivery outlets for attaching hoses, and provided with an escape-valve.

"A steady, constant stream of water is delivered by this class of engine at the ordinary speed of working."

(Here follows diagram marked page 249½.)

I hereby admit that the above is a copy of the matters alluded to in the writing.

JNO. L. BOONE,
Complainant's Solicitor.

250 *Compl't's Exhibit D.*

The U. S. Patent Office, to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper and contents and drawing in the matter of the letters patent granted to Thomas H. Bailey, Feb'y 9th, 1864, 41471. Valves for water-cylinders, &c.

In testimony whereof I, M. D. Leggett, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-third day of August, in the year of our Lord one thousand eight hundred and seventy-three, and of the Independence of the United States the ninety-eighth.

[SEAL.] M. D. LEGGETT,
Commissioner.

251 Thomas H. Bailey, of Troy, N. Y. Letters patent No. 41471, dated Feb'y 9, 1864. Improvement in relief-valves for water-cylinders.

To all whom it may concern:

Be it known that I, Thomas H. Bailey, of Troy, in the county of Rensselaer and State of New York, have invented a new and improved valve for the water-cylinders of steam fire-engines and other pump-cylinders, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a central vertical sectional view of the valve, full size.

Figure 2 is a central vertical sectional view on a smaller scale, showing the attachment of the valve to a pump-cylinder.

Similar letters of reference indicate corresponding parts in both figures.

To enable others to make and apply my invention, I will proceed to describe its construction and operation:

252 A is a casing like that of an ordinary globe-valve attached by a screw-thread, *a*, to a suitable opening provided in the pump-cylinder F, between the said cylinder and the hose or pipe connections. B is a hollow cylinder screwed into the top of the said casing and coming to a bearing on the top of the casing and into contact with a surface surrounding the valve-seat B, but having an opening, *c*, at the bottom toward the outlet opening of the casing. C is the valve, having a conical face, *f*, ground to fit the seat *b*, and having its upper part made in the form of a piston, and packed with leather or other soft material, *g*, to fit water-tight within the cylinder B. This valve has a stem, *d*, which fits to an opening in an adjustable screw-cap, D, which is screwed on to the top of the cylinder B. E is a spiral spring surrounding the valve-stem between the top of the valve and the crown of the screw-cap D, and adjusted by screwing down the said cap to make it produce a greater or less pressure upon the upper side of the valve, that a greater or less pressure may be required upon its under side to open it; *e* is a vent hole in the cylinder B, above the
253 valve, to provide for the escape from the said cylinder to any

water that may pass above the valve G G. Figure 2 are two hose or pipe connections, one of which may be closed by the single-cock H, leaving the other open. Separate cocks may be used for the two pipe connections.

The spring E is intended to be so adjusted that when the hose or pipe connections are both or all open it will exert pressure enough upon the valve to keep it closed, but that when one of the said connections is closed the extra pressure upon pump and hose or pipe, acting upon the lower surface of the valve, may raise it and provide for a suitable escape of water through the outlet *h* of the casing A, and so relieve the pump and hose or pipes. The construction of the upper part of the valve to fit the cylinder B like a piston is intended to prevent any accumulation of water within the said cylinder above the valve, which would interfere with the free opening of the valve; and in case of any water passing the piston by reason of def*l*ective packing, it will escape by the vent *e*.

To enable the valve to be screwed down to bring all practical
254 pressure upon the pump and hose in a trial of an engine there is a hole, *d'*, drilled through the upper of the screw-cap D and valve-stem *d*, when the valve is down in its seat for the reception of a pin, by the insertion of which the valve-stem and cap can be converted rigidly, so that by slightly turning the cap the valve may be screwed down close to its seat.

I do not claim, broadly, the invention or use of spring pistons or valves, but what I claim as my invention, and desire to secure by letters patent, is—

The combination of the valve C, stem *d*, spring E, adjustable cap D, and pin-hole *d'*, whereby the valve may be either held upon its seat with a variable yielding pressure, or may be elevated therefrom or held immovably thereon, as an ordinary sarew-plug.

THOMAS H. BAILEY.

Witnesses:
MARTIN MILLIGAN,
WM. ARCHBOLD.

Ex'd: A. M. E.

255 NEW YORK, *May* 18, 1863.

Hon. COM'R OF PATENTS:

SIR: Herewith we return the specification and drawing of T. H. Bailey's water-valve, with amendments. A reconsideration is respectfully asked.

If the claim or any part of the specification is deemed inadmissible, we shall feel obliged by the suggestions of such a change as will probably meet the views of the office.

We have the honor to be your ob't serv'ts,

MUNN & CO.

(Endorsed:) Filed May 26, 1863. T. C. C.
REC. 1141—6

256 The specification of T. H. Bailey's water-valve is hereby amended.

1. By adding the following at end of the page 6:

A. Insert. | I do not claim broadly the invention or use of spring pistons or valves; but

2. By erasing the claim; substituting—

B. Insert as claim. | Having the piston C and its spring E arranged with the cylinder B and the adjusting screw-cap D, in the manner herein shown and described; so that while the water is prevented from passing above the valve, the pressure of the spring upon the valve may be regulated at pleasure by adjusting the cap D, all as set forth.

T. H. BAILEY,
Per MUNN & CO.,
Attorneys.

(Endorsed:) Filed May 26, 1863. T. C. C.

257 U. S. PATENT OFFICE, *May 27th*, 1863.

SIR: In your note of the 8th inst. you say that the valve of Mr. Alrich will not turn in the cylinder, which is true; you also claim that yours will, which is also true; and yet this a mere accident in the construction of your device, and whether it does or not, the functions are the same.

In his case it was necessary for certain purposes to prevent the valve from turning. You also speak of the necessity of using a key; this arises from the fact that his device is applied to a different purpose. Were it applied, as yours is, to the base of a fire-engine, or in any other portion, under a sufficient pressure, no key would be required.

It must therefore be regarded as the same, substantially, as yours, and your application accordingly rejected.

Specification and this drawing herewith returned.

, *Com'r.*

THOMAS H. BAILEY,
(Care Munn & Co., N. Y.)
2 B. BLANCHARD.

258 WASHINGTON, D. C., *Jan'ry 19th*, 1864.

Hon. D. P. HOLLOWAY,
Commissioner of Patents:

SIR: We herewith return the specification and drawing of T. H. Bailey's water-valve, together with an amendment, which we trust will remove the objections stated in the official letter of May 27th, 1863, and meet the requirements of the office.

Very respectfully, your ob't servants,

MUNN & CO.

(Endorsed:) Filed Jan. 13, 1864. T. C. C.

259 The specification of T. H. Bailey's water-valve is hereby further amended by erasing the whole of page 2, excepting the first two lines.

A. Also by erasing the claim and inserting instead the following:

B. Insert.

> The combination of the valve C, stem *d*, spring E, adjustable cap D, and pin-hole *d'*, whereby the valve may be either held upon its seat with a variable yielding pressure or may be elevated therefrom, or held immovably thereon, as an ordinary screw-plug.

T. H. BAILEY,
By MUNN & CO.,
Attorneys.

WASHINGTON, D. C., *January* 9, 1864.

(Endorsed:) Filed Jan. 13, 1864. T. C. C.

260 *Fire on Ida Hill.*—The varnish factory of Joseph De Golyer & Brothers, on Thirteenth st., Ida Hill, caught fire about 9 o'clock this morning, and in a short time everything that was combustible about the establishment was burned. The operations attending the manufacture of varnish require the greatest amount of caution to guard against fire, and all possible care is taken by the employés of Messrs. De Golyer.

A slight defect in the melting chimney, almost too small to be observable, caused the fire this morning. Through a minute crevice in the brick-work a jet of flame rushed, and communicated with the benzine gas in the interior of the building. The factory consisted of a large brick structure and a tall chimney. It was situated at an elevation of over three hundred feet above the main part of the city, and the flame and smoke, as they poured from the chimney, were sufficiently conspicuous to attract attention and cause alarm. To reach the scene of the fire, however, was no easy task. It was first accomplished by the vigilant officers and employés of the steamer Hugh Rankin

261 No. 2. The engine was taken up the hill by a span of horses, and "Silver" found no difficulty in drawing cart with one thousand feet of hose. Until the arrival of the Rankin the efforts of hand-engine, No. 10, which is stationed on Ida Hill, had been directed to the protection of the adjacent property. It seemed impossible that an effective stream could be brought from the steamer; the fact was accomplished, however. The members, under the direction of Capt. Green, laid one thousand feet of hose, up an elevation of one hundred and twenty feet from the engine, and the force of the water drowned out the fire in the midst of a quantity of benzine and varnish.

We think the performances of the Rankin to-day will challenge comparison with those of any steamer in this city or other places. By the adaptation of a valve, the invention of Engineer Bailey, the pressure of the water was regulated and the bursting of hose prevented.

There was an immense concourse of citizens and firemen on Ida Hill, and the spectacle presented by the burning building was grand in the extreme.

In addition to the valuable services of Engine No. 10, Franklin

262 Hose Co., and Washington Volunteers, with the steamers Read and Osgood were on the ground.

Mr. De Golyer estimated the loss of the fire at about $2,000. There was no insurance either upon the building or its contents. John Rychen, an employé and a respected member of the night police force, was badly burned upon the face and hands when the fire first broke out. Dr. Burton attended him.

Several houses in the vicinity were in imminent danger at one time, but the occupants only sustained slight loss, principally by the moving of furniture. Their names were James Murphy, Michael Kelly, Peter Kelly, Lemuel Hurlbut, and Messrs. Folinsbee, Crozier, & Brown.

No. 41471. Blanchard, 69–27.

Thomas H. Bailey, of Troy, county of Rensselaer, State of New York.

VALVES FOR WATER-CYLINDERS, &C.

	Rec'd	Feb'ry	6,	1863
263	Petition	Feb'y	6,	1863
	Affidavit	"	"	"
	Specification	"	"	"
	2 drawings	"	"	"
	1 model	"	12,	"
	1 cert. dep., $15	"	6,	"
	Cash:			
	1 add'l fee, cert., $20	Jan.	29,	1864
	" " cash.			

Examined Jan. 14th, 1864. J. M. Blanchard:
2 issue, Hayes, Jan. 15th, 1864.
3 patented Feb. 9, 1864.
Recorded, vol. 158, page 123.
Circular, Jan'y 15, 1864.

MUNN & CO., *N. Y.*

Letter, spec., & thin drawing ret'd March 26, 1863.
B. S. McD. Rejected spec'n & thin dr'g ret'd May 27, 1863.
Improvement in relief-valve for water-cylinders.

264 PETITION.

To the Commissioner of Patents of the United States of America:

The petition of Thomas H. Bailey, of Troy, in the county of Rensselaer, and State of New York, respectfully represents:

That your petitioner has invented a new and improved valve for the water-cylinders of steam fire-engines and other pump-cylinders, which he verily believes has not been known or used prior to the invention thereof by your petitioner.

He therefore prays that letters patent of the United States of America may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions expressed in the act of Congress in that case made and provided, he having paid fifteen dollars into the Treasury of the United States, and otherwise complied with the requirements of said act.

And he hereby authorizes O. D. Munn, S. H. Wales, and H. E. Beach, of the firm of Munn & Co., of the cities of New York and Wash-
265 ington, or their accredited agents, to act as his attorneys in presenting the application, and in making all such alterations and amendments as may be required, and to sign his name to the drawings.

[50. T. H. B., Jan. 29, 1863. 50.]

THOMAS H. BAILEY.

OATH.

COUNTY OF RENSSELAER,
State of New York, ss:

On this 29th day of January, 1863, before the subscriber, a com'r of deeds in and for said county, personally appeared the above-named Thomas H. Bailey and made solemn oath that he verily believes himself to be the original and first inventor of the within-described improved valve for the water-cylinders of steam fire-engines and other pump-cylinders, and that he does not know or believe that the same was ever before known or used, and that he is a citizen of the United States.

WM. ARCHBOLD,
Com'r of Deeds, Troy, N. Y.

266 To all whom it may concern:

Be it known that I, Thomas H. Bailey, of Troy, in the county of Rensselaer and State of New York, have invented a new and improved valve for the water-cylinders of steam fire-engines and other pump-cylinders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a central vertical sectional view of the valve, full size.

Figure 2 is a central vertical sectional view on a smaller scale, showing the attachment of the valve to a pump-cylinder.

Similar letters of reference indicate corresponding parts in both figures.

267 This invention is more especially intended for application to steam fire-engines. The cylinders of these machines are generally fitted with connections for throwing two or more streams; and it is often necessary or desirable to shut off one or more of the streams and throw an extra pressure upon the pump and hose, which is liable to cause the bursting of the hose. The only means heretofore adopted to prevent this has been to apply an escape-valve, which has been opened, when necessary, by the hand of the engineer in charge. My invention consists in a valve of novel construction, controlled by a spring in such a manner that it shall open automatically and instantaneously, to relieve the cylinder and hose or other pipes of extra pressure whenever necessary.

Erase by amend't A, Jan. 13, 1864.

To enable others to make and apply my invention, I will proceed to describe its construction and operation:

A is a casing like that of an ordinary globe-valve attached by a screw-thread, *a*, to a suitable opening provided in the pump-cyl-
268 inder F, between the said cylinder and the hose or pipe connections. B is a hollow cylinder screwed into the top of the said casing and coming to a bearing on the top of the casing and into contact with a surface surrounding the valve-seat, *b*, but having an opening, *c*, at the bottom toward the outlet opening of the casing. C is the valve, having a conical face, *f*, ground to fit the seat *b*, and having its upper part made in the form of a piston and packed with leather or other soft material *g*, to fit water-tight within

the cylinder B. This valve has a stem, *d*, which fits to an opening in an adjustable screw-cap, D, which is screwed on to the top of the cylinder B. E is a spiral spring surrounding the valve-stem between the top of the valve and the crown of the screw-cap D, and adjusted by screwing down the said cap to make it produce a greater or less pressure upon the upper side of the valve, that a greater or less pressure may be required upon its under side to open it. *e* is a vent-hole in the cylinder B, above the valve, to provide for the escape from the said cylinder of any water that may pass above the valve. G G, Fig-
269 ure 2, are two hose or pipe connections, one of which may be closed by the single cock H, leaving the other open. Separate cocks may be used for the two pipe connections.

The spring E is intended to be so adjusted that when the hose or pipe connections are both, or all, open, it will exert pressure enough upon the valve to keep it closed, but that when one of the said connections is closed the extra pressure upon pump and hose or pipe, acting upon the lower surface of the valve, may raise it and provide for a suitable escape of water through the outlet *h*, of the casing A, and so relieve the pump and hose or pipe.

The construction of the upper part of the valve to fit the cylinder B, like a piston, is intended to prevent any accumulation of water within the said cylinder above the valve, which would interfere with the free opening of the valve, and in case of any water passing the piston by reason of defective packing it will escape by the vent *e*.

To enable the valve to be screwed down, to bring all practical
270 pressure upon the pump and hose in a trial of an engine, there is a hole, *d'*, drilled through the upper part of the screw-cap D and valve-stem *d*, when the valve is down on its seat for the reception of a pin, by the insertion of which the valve-stem and cap can be connected rigidly, so that by slightly turning the cap the valve may be screwed down close to its seat.

(Here insert amd't "A." May 26, 1863.)

What I claim as my invention, and desire to secure by letters patent, is—

Erase and insert am'd't B. Filed Jan'ry 13, 1864.

The valve and casing constructed with a capped cylinder B, secured to the casing, and with the upper part of the valve fitted as a piston to the said cylinder, and having combined with them a spring E substantially as and for the purposes herein set forth.

THOMAS H. BAILEY.

Witnesses:
MARTIN MILLIGAN,
WM. ARCHBOLD.

(Endorsed:) Rec'd & filed Feb. 6, 1863. E. E.

271 267.] U. S. PATENT OFFICE, *March 26th*, 1863.

SIR: In the oath attached to your specification you say, "before the subscriber, a justice of the peace, &c.," but this is signed "Wm. Archibold, com'r of deeds." This should be corrected.

Your claim as at present presented is anticipated. See patents to Levi Alrich of Sept. 25, 1860, and Edwin Bailey of Aug. 26, 1862.

Specification and thin drawing herewith returned.

, *Com.*

THOMAS H. BAILEY, Esq.,
(Care of Munn & Co., N. Y.)

2 B. BLANCHARD.

272 HOUSE OF HUGH RANKIN STEAMER, 2,
Troy, May 8, 1863.

Messrs. MUNN & CO., *Patent Agency:*

GENTLEMEN: Your favor dated 4th came duly to hand, for which accept thanks.

Regarding L. L. Alrich patent, it appears to me to consists in a valve or plug, arranged to move up or down or will not turn in the cylinder, said valve-plug is acted on by a spring that the flow of liquid can only be obtained by use of a key adapted to the faucet. My valve is directly the opposite in its working, and is so constructed that it will turn in the cylinder, and my valve will allow the flow of liquid without a handle or key. Set the valve at any given pressure, and the pressure alone operates the opening of the valve, making the key unnecessary.

As to my namesake Bailey's "patent cut-off" for hydrants, he claims the combination of the spring cut-off, with the series of openings or perforations. I claim nothing regarding perforations; if you
273 examine his drawings you will observe that his valve is so constructed that in lifting his valve the water covers the top of valve, making a pressure on top of valve from this cause, which extra pressure his spring has to overcome.

Herewith you have a good drawing representing my device. In addition to what I have already informed you, I claim arranging of valve marked B, so that in opening the same no liquid can cover the top of valve, avoiding any pressure otherwise than in the spring itself; said spring is adjustable, and, when set, the pressure on the bottom of valve alone opens the same, and when said pressure is removed the valve closes, without concussion of itself, no key or handle being required to operate the valve, as in Alrich or Bailey's claims.

With these few "ideas" accompanying the enclosed drawing, combined with your experiences, think can work out a "case."

Anything you may wish to learn please write, and the same will be attended to.

Very respectfully,

THOMAS H. BAILEY,
By S. K. BRIGGS.

(Here follow 6 diagrams marked pages 274, 275, 275½, 276, 277, and 278.)

279 *Defendants' Exhibit J.*

151045. Relief-valves for fire-engines. Gilbert J. Orr, New York, N. Y. Patented, May 19, 1874.

To all whom it may concern:

Be it known that I, Gilbert J. Orr, of the city and State of New York, have invented an improvement in relief-valves for steam fire-engines, of which the following is a specification:

Valves for fire-engines have been made to operate automatically when the pressure of water in the hose increases in consequence of the

flow through the same being checked, such valve operating to open a return water-way between the supply and delivery chambers of the pump.

My improvement is made for the purpose of removing the spring from the water chamber, and thereby lessening the risk of injury to such spring, and at the same time I dispense with the piston that has been used to move the valve.

In the drawing, Figure I is a vertical section of the valve and operative mechanism, an' Fig. 2 is a sectional plan of the line *x x*.

The water-ways, A and B, of the pump are separated by the
280 partition C, in which is an opening for the valve D, that is upon a spindle, E, passing through guides in the tube F, which tube F is screwed into an opening in the outer casing G, of the pump. The spindle E passes through a packing gland, K, and is made with a screw-thread acting in the cap L, and a hand-wheel, M, is provided, and these parts are substantially similar to the ordinary relief-valves, as the valve D is raised or lowered to open or close the opening in the partition C, by turning the hand-wheel M, screw-stem E, and valve: in the normal position the inside of the cap I rests upon the upper end of the tube F, and the cap extends around the tube F in the form of a short tube F, and a packing, I, interposed between F and F′. Around the tube F is a spring M, of rubber or wire helix. I have shown the latter, and this spring is received within the sliding-socket N, that surrounds the tube F, and is kept from turning, but allowed to slide endwise by a key and slot 2. Upon the exterior surfaces of F′ and N screw-threads are cut in opposite directions, and these are connected by the sleeve O, that is made with right and left handed in-
281 ternal screw-threads and handles R on the outside are employed to revolve the sleeve and thereby draw the socket N toward the cap L, and compress the spring M, or the reverse, and a handle, S, serves to hold the cap L and its tube F′, and prevent their turning when the sleeve *o* is being revolved.

At the upper end of the tube F are notches or holes that allow the water to press against the entire under side of the cap L, so that whenever the pressure in the delivery water-way A is sufficient in its action upon the inside of said cap to raise the cap L and valve D against the action of the spring the water-way is opened for the return of the water to the induction side of the pump. In so doing, the head L is moved away from the end of the tube F, and it returns to the same when the valve D is closed.

The valve D can be opened by hand by revolving the wheel M so as to raise or close the valve in the ordinary manner.

By this construction the spring is incased, and outside the water-tube, and the parts are in place for the ordinary use as a relief-valve.

The spring can be adjusted by revolving the sleeve O so as to
282 set the valve to open automatically at any desired pressure.

I claim as my invention 5*

The packing I, spring M, socket N, and adjusting sleeve O, in combination with the cap L, tube F, screw-stem E, and valve of the ordinary relief-valve as and for the purposes set forth.

Signed by me this 24th day of April, A. D. 1874.

GILBERT J. ORR.

Witnesses:

GEO. T. PICKNEY.

CHAS. H. SMITH.

(Here follows diagram marked page 283.)

284 UNITED STATES OF AMERICA,
District of California, ss:

I, L. S. B. Sawyer, clerk of the circuit court of the United States of the ninth judicial circuit in and for the district of California, do hereby certify that the foregoing two hundred and eighty-three pages, numbered from one to two hundred and eighty-three, both inclusive, are a full, true, and correct copy of the record and of all the proceedings in the cause therein entitled, and that the same together constitute the transcript on appeal to the Supreme Court of the United States of America in said cause.

Witness my hand and the seal of said circuit court this 12th day of July, A. D. 1881.

[SEAL.] L. S. B. SAWYER, *Clerk.*

(Indorsement on cover:) No. 1141. Charles E. Blake, appellant, vs. The City and County of San Francisco, David Scannell, A. T. Bryant, G. E. Sloss, Gus. Reis, Edward Flatherty, Peter Hopkins, and Charles Field. California C. C. U. S. Filed 10th November, 1881.

REC. 1141—7

113-679 Court.

Office Supreme Court
FILED
DEC 2 188

Supreme Court of the United States.

OCTOBER TERM, 1884.

No. 155.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO, DAVID SCANNELL, A. T. BRYANT, G. E. STOSS, GUS REIS, EDWARD FAHERTY, PETER HOPKINS AND CHARLES FIELD.

BRIEF FOR THE APPELLANT

GEO. W. DYER,
For Complainant.

WASHINGTON, D. C.
R. BERESFORD, PRINTER, 523 7TH STREET.
1884.

Supreme Court of the United States.

No. 155. OCTOBER TERM, 1884.

CHARLES E. BLAKE
vs.
THE CITY AND COUNTY OF SAN FRANCISCO, DAVID SCANNELL, A. T. BRYANT, G. E. STOSS, GUS REIS, EDWARD FAHERTY, PETER HOPKINS AND CHARLES FIELD.

BRIEF FOR THE APPELLANT.

STATEMENT.

This case comes here by appeal from the Circuit Court of the United States for the District of California, which court, on August 17, 1880, dismissed the appellant's bill.

The appellant brought his bill against the defendants on November 11, 1878, alleging an infringement by them of reissued letters patent No. 7,886, granted to him as assignee, September 18, 1877, for improvements in relief valves in water cylinders, which improvements were the invention of Thomas H. Bailey, whose original patent, No. 41,471, was granted February 9, 1864.

The defendants, in their answer, denied the infringement; denied that Bailey was the first and original inventor of the

improvements described in the original patent; denied that the reissue was for the same invention as that described in the original patent; asserted public use and sale more than two years before Bailey's application and abandonment to the public, and admitted that they had been using relief valves like those described in the patent granted to G. S. Orr, May, 19, 1874, No. 15,045.

The complainant put in evidence his reissue letters patent in suit, No. 7,886, dated September 18, 1877, granted to complainant as assignee, which was sufficient proof of title for the purposes of the suit; and, in addition, proof that Bridget Wallace was appointed administratrix of the estate of Thomas H. Bailey, the original patentee, and an assignment of patent No. 41,471 from Bridget Wallace to the complainant.

Also testimony of several witnesses as to the fact of infringement by defendants, the City of San Francisco, by the use of steam fire engines with relief valves like those described in complainant's patent in suit.

Subsequently the complainant put in evidence the file wrapper and contents in Bailey's application for patent 41,871, and a copy of the decision of the Board of Examiners-in-Chief of the Patent Office, allowing the first claim of the patent in suit, on appeal to them.

The defendants put in evidence Bailey's original patent No. 41,471, and an extract from an English publication of 1856, describing an invention patented in England to Armstrong in 1846.

Also an extract from another English publication in 1862, describing the floating fire engines of Merryweather and Son, and called witnesses, who produced certain exhibit sketches of valves of which they had knowledge.

It is evident that the real questions in controversy turn wholly upon the validity of complainant's reissued patent in suit, so far as

relates to the invention set out in the second claim, and upon the infringement of such claim by the use of a construction such as is described and illustrated in the Orr patent, No. 153,045.

The invention described, both in the original patent, No. 41,471, and in reissue 9,886, is for a device for the water cylinders of steam fire engines and other pump cylinders, for the purpose of relieving automatically the strain upon the pump and the fire hose, in case of obstructions likely to burst the hose, and it effected this purpose by the opening of the valve when an abnormal pressure was put upon the cylinder or the hose, and allowing the excess of water to be diverted from the fire hose and be discharged elsewhere.

The particular mechanism employed was a shell or case, described as placed between the cylinder of a steam fire engine and the hose pipe connections, and, as shown on the drawings attached to the hose connection near the cylinder, so that the water forced out of the cylinder into the hose would enter this shell with pressure equal to that in the cylinder and hose.

The shell had an inlet on the side where it was attached to the hose connection, and an outlet on its opposite side.

Under ordinary or safe pressures all the water passed directly from the cylinder through the hose.

When the pressure was abnormal it opened the valve in the shell against the pressure of a spring, and the excess of water passed through the outlet of the shell to the ground.

The valve spring was adjusted to exert the desired pressure upon the valve by screwing down the cap of the shell upon the spring, and thus compressing it.

This cap had a pin-hole, *d*, for the reception of a pin, which

Upon a hearing the court dismissed the bill by decree dated August 17, 1880, and subsequently denied a petition for rehearing upon the second claim of the patent in suit, and then an appeal was taken to this court and entered at the October Term of 1881.

The decree below is alleged to be erroneous as to the second claim of the patent in suit, which was the only claim of the original patent.

seat, or when screwed down to a less degree would hold the valve firmly above its seat.

The original claim, and the second claim of the reissue are alike, and read as follows:

> "The combination of the valve C, stem *d*, spring E, adjustable cap D, and pin-hole *d'*, whereby the valve may be either held upon its seat with a variable, yielding pressure, or may be elevated therefrom or held immovably thereon as an ordinary screw plug."

This claim covers a combination wherein the valve is adapted as well as intended to perform three functions, viz:

a. It is automatic under variable water pressure, yielding and leaving its seat only upon excess of pressure.

b. It can be converted into a permanently open valve, or

c. Into a permanently closed valve, like a plug valve.

I

The evidence does not affect the validity of the second claim of the patent in suit.

The defendants put in evidence the following exhibits:

1. The Armstrong English patent, No. 11,319, of 1846, for a hydraulic crane, as described in a certain book.

2. The publication of 1852 about the Merryweather fire engine.

No evidence whatever was offered in explanation of the Armstrong valve, and the only evidence about the Merryweather valve is the statement of Pardy, that it was "an automatic relief valve" (f. 108).

The sketches in connection with these exhibits are very crude, but they show in each instance a valve in a branch pipe which would open under pressure in the main pipe and allow water to escape through the branch pipe and relieve the pressure on the main pipe.

They show no means for regulating the opening of these relief valves under a certain pressure, and no means of keeping the valves either permanently open or rigidly closed, and are adapted to perform but one function of the Bailey, valve, viz: that of yielding under pressure, but not of yielding under an adjusted pressure capable of variation.

The defendants also put in evidence by the testimony of Pardy, certain safety valves, and illustrated them by exhibit sketches as follows:

3. Exhibit E.
4. Exhibit F.
5. Exhibit G.
6. Exhibit H.

These exhibits, E, F, G and H, were made by Pardy, one of defendants' witnesses, for use at this trial (f. 169), and he is the principal witness in regard to them.

The witness describes Exhibit E, as follows (f. 150):

> "A. This valve, marked 'Exhibit E,' is about one of the first valves I was ever acquainted with. I have no hesitancy in saying that I saw that valve long prior to 1864, but it is impossible for me to say precisely the time I did see it. There were a number of valves in the storeroom of the Vulcan Iron Works at the time I went there in 1858, and this valve was amongst the others. I saw it in that storeroom long prior to 1864.
>
> "Q. 15. Was that an automatic relief valve?
>
> "A. That is an automatic relief valve. It is a valve that can be held upon its seat by screwing the cap down until the top of the guide in the cap strikes upon the top of the stem of the valve. The valve can be, in a practical sense, opened when the valve cap A is screwed up so as to release the tension on the spring, or the valve can be easily taken out altogether, so that practically it has the same functions in every respect that the Bailey valve has." *

An inspection of the sketch, Exhibit E, discloses clearly the fact that this is an ordinary automatic steam relief or safety valve, where pressure of the spring may be regulated to a certain extent, with the effect of changing the point of relief under various steam pressures.

If used for a water relief valve, the sketch showing the cap in such position that when the valve is opened by a water pressure which would force the top of the valve stem up against the inside of the cap, the valve would allow the passage of enough water through the outlet to partially fill it.

If the cap is raised higher, and consequently the pressure of the spring relieved, then the valve would allow water enough to pass through the outlet to fill it.

If the cap was screwed down more than shown in the sketch, the pressure of the spring would be increased, and the valve could rise from its seat only enough to allow the least amount of water to pass through the outlet.

This relief valve was, therefore, so contrived that it would operate under little water pressure, but as the water pressure was increased and the need of relief increased the valve could give less and less relief.

If the cap was screwed down upon the top of the valve stem the valve would be positively closed like a plug valve, but no position of the cap would hold the valve open like Bailey's valve.

In the Bailey valve, whatever the position of the cap, full relief would always be given.

It is evident that this sketch does not show the functions of the Bailey valve, even when used in a way for which it clearly was never intended or adapted, and in a way, of which there is no particle of proof that it was ever used. Moreover, the defendant's evidence about the valve itself is that this witness saw it among other valves in a store-

room, before 1864, but never saw it in use *before* 1864, (f. 175,) and Deacon, another of defendants' witnesses, who had testified that he had seen a valve substantially like Exhibit E, and that it was an ordinary mechanical device, prior to 1864, adds "but not in that shape."

"Exhibit H, that is the same device," "in somewhat different form"(f. 187).

The same witness, Pardy, describes Exhibit F as follows (f. 152–3):

> "A. This valve, Exhibit F, is one of the commonest style of boiler safety valves.
>
> "I saw this valve long prior to 1864.
>
> "The valve can be operated as a stop valve by inserting a wedge above the lever between the guide, and it can be operated to keep the valve open by inserting a wedge in the lever guide, but below the lever.
>
> "There is no function possessed by the Bailey valve but is possessed by this valve, practically speaking.
>
> "Q. 26. This valve shown by Exhibit F, is arranged with a knob and weight?
>
> "A. Which takes the place of the spring.
>
> "Q. 27. The mechanical result?
>
> "A. The mechanical result is the same, the weight and lever of course being an equivalent of the spring.
>
> "It is merely a means of obtaining pressure upon the valve."

In this exhibit, which is an ordinary steam safety valve, a movable weight on a lever arm holds the valve constantly on its seat with an adjustable pressure, with an upward movement of the valve limited by the slot in which the lever arm traverses up and down.

It has no provision for keeping the valve open or closed. It is suggested that wedges might be used for that purpose, but there is no evidence that it was ever done.

The same witness describes Exhibit G, as follows (f. 153, 154, 155):

"A. This valve is a copy of the valve exhibited in the Bailey's patent, with a slight change made in the cap, so that the stem will not pass through the cap. When the valve is constructed in that form it is precisely similar to valves that I have seen before.

"Q. 29. When and where?

"A. In San Francisco, long prior to 1864. I might except, however, that I probably did not see the piston attached to the valve. If the piston is taken away, then the balance is common to my knowledge.

"Q. 30. Why did you not see the piston.

"A. I may have seen it, but I cannot be positive of it. I know it is very common, but I could not say I saw it before 1864. I have seen it after 1864, certainly.

"Q. 31. What is the difference or distinction between that valve shown by Exhibit G and the Bailey valve, as shown by the drawings of the reissue patent?

"A. The difference is in the cap. In the Bailey patent the stem passes through the cap. In this Exhibit G the stem is not allowed to pass through the cap, but the hub of the cap encloses the stem. That is an arrangement to prevent leakage.

"Q. 32, What would be the effect of securing the cap of that valve down upon the head of the stem?

"A. If you screw that valve down until the cap of the cavity strikes the head of the stem the valve will be kept closed; but it is then a stop valve.

"Q. 33. Is that synonymous with the term 'screw-plug?'

"A. Well, the screw-plug does the same thing in a different way; it does the same act in a different manner. The result is the same as far as holding the valve down upon its seat.

"Q. 34. It would hold the face of the valve down upon its seat rigidly, would it?

"A. It would hold the valve down rigidly. You can also, with this valve, exactly as it is in Exhibit G. If you want to allow the valve to open so that water will pass through the valve, all you have to do is to screw the cap up until you have released all tension from the spring. Then practically, the valve is open. If the whole of the valve was turned upside down then the valve would fall from its seat."

This is another safety valve, and is shown in the sketch

with the cap screwed down upon the top of the valve stem, and the valve thus locked down in its seat, so that the valve can not be raised by any pressure whatever.

It is of the same character as the valve shown as Exhibit E.

It will operate as a relief valve with water, where there is very little water pressure, and the spring is expanded by screwing the cap up.

When there is a great water pressure, and the spring is compressed, it will give no relief, because it will not allow the passage of any considerable body of water.

It has no means for keeping the valve permanently open.

The same witness describes Exhibit H, as follows (f. 156):

"A. This Exhibit H is another very common style of valve which I saw prior to 1864.

"I have a memorandum which tells me that I saw that in 1860 or 1861. This valve operates as an automatic relief valve. It will operate as a stop valve, and the valve can be held from its seat.

"If you wish to hold the valve from its seat, you simply stick a wedge between the collar on the stem and the top of the gland of the stuffing box.

"If you wish to hold the valve down upon its seat you can screw down the nuts A′ and A″ until the cross-bar A, strikes on the top of the shoulder B, then the valve will be immovable—closed upon its seat

"That is a very common valve."

This is another safety valve, and, although differing somewhat in construction from the valves Exhibits E and G, operates in the same way, the cross-piece screwing down rigidly on a shoulder on the valve stem, and limiting the upward movement of the valve stem instead of the cap screwing down on the top of the valve stem, as in E and G, and with the same effect, viz: a lessening capacity to give relief as the spring is compressed.

And, as in Exhibits E and G, it has no means of keeping the valve permanently open.

It seems, then—

That Exhibits E, G and H, are constructed so as to act with water as relief valves, giving less and less relief under increasing pressures, and neither has any means for keeping the valve permanently open; and that Exhibit F differs only from the other exhibits in having no means for keeping the valve either open or closed.

More particularly—

Exhibit E has simply the capacity of the Bailey valve to be opened under pressure, without the capacity to be held open.

It will be noticed that in each of these exhibits safety valves there is a provision for limiting the upward movement of the valve stem, which is a necessity arising from the sudden and great changes in steam pressures, which provision is found in all safety valves, and is essential in use. On the contrary, in Bailey's water relief valve, and in later valves, like Orr's for instance, there is no limit to the movement of the valve stem except that provided by the compression of the spring.

Exhibit F is a boiler safety valve, which the only witness appears to have seen "long prior to 1864."

This valve has no spring, and no mechanism for keeping the valve either open or closed.

It is suggested by the witness that wedges may be used for that purpose (f. 152).

Exhibit G was seen by the only witness "long prior to 1864" (f. 154), as shown, complete, not before 1864, certainly after 1864 (f. 154).

It has no means of keeping the valve permantly open.

Exhibit H is a common relief valve, seen by witness in 1860 or 1861. If the cross-bar was screwed down on the

shoulder on the stem, as it was not intended to be, the shoulder being intended to limit the upward movement of the valve, and if a wedge was inserted in the right place, this device could be converted into a permanently open or permanently closed valve.

Neither of these exhibits, E, F or G, are proved to have been in use prior to 1864, and it is doubtful about H (f. 180); and the original application of Bailey was filed February 6, 1863, as appears by the copy of the file wrapper (f. 263).

Not one of these exhibits possesses either the construction or the combination of the second claim in suit, or is capable in itself of the same functions.

If changed in construction, with added appliances, and used in a way in which they were never used and for which they were never intended to be used, they could be made to perform more or less perfectly more or less of the functions of the Bailey valve, but would not thereby anticipate the Bailey patent.

Clough *vs.* Barker, 16 Otto, 166.

In addition, Mr. Deacon, one of the defendants' witnesses, testified about a relief valve exhibit A, which he saw on the steam pump of the steamer *Lillian*, which was a simple check valve (f. 121), and he saw it in the latter part of January, 1864 (f. 122).

Mr. Rainey, another one of the defendants' witnesses, testified to a relief valve to the steam pump, on the Golden Gate in 1850 (f. 130), but it turned out that he never saw it all (f. 137).

This is all of the testimony which asserts an anticipation of complainant's patent.

Prior to Bailey's invention there were automatic relief valves, intended and used simply as steam safety valves, and one kind shown as "Exhibit H" is proved to have been in use before 1863.

In this valve, by the use of wedges in a certain relation, the valve could be permanently held open.

By screwing down the cross bar in an unusual way the valve could be permanently closed.

This valve was intended for use with steam, and not with water.

Used with water it denied relief at the very time when relief was needed.

NEITHER OF THE VALVES ANTICIPATED BAILEY'S INVENTION.

It required the exercise of invention, in view of the state of the art, to produce the Bailey valve.

It was not the grafting of one old element in a corresponding valve into other old elements of a valve of like character, as the evidence does not show any earlier valve, with means to hold it open, or show any valve of like character.

The Bailey valve, so far as the record discloses, was a new valve; new in construction, in arrangement of parts, in the mode of operation, and in its attachment to a steam fire engine.

It was not simply a mechanical change in a well known construction in the same direction, but a change in another direction, which would not naturally suggest itself to the mechanic.

To adapt the steam relief valves for use upon fire engines involved the passage of the valve stem through the cap, with a free movement up and down therein, so that whatever pressure was exerted on the spring the valve would have full freedom of movement, restrained only by spring pressure, and this construction would destroy its use for steam, which required a rigid limit to the movement of the valve stem and preferably a closed or steam air-tight cap.

It must be borne in mind, as a matter of common knowledge, that steam connections are strongly made of metal

adapted to resist great pressure, while the hose of fire engines must be flexible, and therefore comparatively weak; and there is required for these latter not only a quick relief, but a very large relief.

It required also an adaptation to be closed like a plug valve, (for instance when testing hose,) which the relief valve did not have, as it would tend to explosion, and to be held open, (as for instance when changing nozzle pipes,) which would be fatal to the use of the steam relief valve, as thereby expensive power would be wasted.

The invention was not trivial, because it came early into beneficial use and has since been largely adopted.

It displays the quality of invention quite as much as many structures which have received the favorable consideration of the courts.

Loom Co. *vs.* Higgins, 105, U. S. 580.

II.

Valves made in accordance with the description in the patent of Orr, No. 151,045, infringe the second claim of the patent in suit.

The Orr valves were used for the same purpose as that described in the Bailey patent, viz: in connection with steam fire engines to relieve the pump cylinder and hose.

The Orr valves were located in reference to a steam fire engine substantially as described in the Bailey patent, viz: in connection with the pump cylinder.

The Orr valves had the same functions as described in the Bailey patent, viz: to open the valve automatically under abnormal pressure, and also to keep the valve constantly open or keep it constantly closed.

The Orr valves used the same elements, or their equiva-

lents, to perform these various functions as are described in Bailey's patent and combined in his second claim.

1. In each is the same valve, called C by Bailey, *d* by Orr, and

2. The same stem, called *d* by Bailey, and *e* by Orr, and

3. The same spring, called E by Bailey, and *m* by Orr.

The remaining elements named in the second claim of the Bailey patent are the "adjustable cap D," and "pin-hole *d*."

4. The Bailey "adjustable cap D" is screw threaded upon its inside, and works upon corresponding screw threads upon the outside of the shell, its office being to compress the spring E, more or less as required to adjust the valve to a certain pressure.

The Orr cap *l* is adjustable up and down, is screw threaded upon its outside, and works upon corresponding screw threads in a sleeve, its office being to compress the spring *m*, more or less, as required to adjust the valve to a certain pressure.

This cap *l* has a handle S, which it is described may be held so that it may not turn when the sleeve is revolved by means of its handles *r*, but it is evident that if the sleeve is held from turning by means of its handles *r*, the cap *l* may be screwed up and down by means of its handle S.

It follows, then, that both of the caps are adjustable, both perform the same function of compressing the spring for the same purpose, both perform it by being screwed up and down, and the only difference is that one screw cap turns upon the *outside* of a correspondingly screw threaded surface, while the other turns upon the *inside* of a correspondingly screw threaded surface, or this surface may be turned upon the cap.

5. The last element in the Bailey claim is the "pin-hole *d'*," which by intendment carries a suitable pin into the claim.

The office of this pin-hole *d'* and pin is to lock the "adjustable cap D" to the valve stem *d*, so that the two will turn together.

When turned in one direction, the valve is lifted entirely off of its seat and held firmly in this position; when turned in the other direction the valve is pressed down upon its seat and held firmly there.

In the Orr patent the stem is screw threaded at its upper end, passing through a correspondingly screw threaded opening in the cap *l*, which screw thread holds the stem in position within the cap, in the same way that the pin in the pin-hole *d'* holds the stem with the cap D in the Bailey patent.

If either the cap *l* or the sleeve *o* is turned in the proper direction, it carries the valve down and holds it firmly on its seat; if it is turned in the opposite direction, it lifts the valve off from its seat and holds it open firmly.

The screw threads on the stem *e*, and the correspondingly screw threaded opening of the Orr patent are the equivalents of the pin-hole *d'* and pin of the Bailey patent, because both effect the same purpose, in substantially the same way, as much as a nail and a screw are equivalents, where the common purpose is to hold two pieces of wood together.

The Orr valve as described has not only every element of Bailey's second claim or its equivalents, but it has all the elements combined together and operating in the same way as in the second claim of the Bailey patent.

In each instance the valve covers its seat, the stem keeps the valve in line, the spring is loose within the case and encloses the stem, the cap compresses the spring more or less,

and holds the valve with a greater or less pressure upon its seat, and the pin-hole and pin of Bailey and the screw stem of Orr each serve to raise the valve from its seat and hold it open or depress it upon its seat and hold it closed.

Machine Co. *vs.* Murphy, 97. U. S., 120.

Blake vs. Robertson 94 U. S. 728.

The Orr valve has an additional feature not shown in the Bailey patent, viz: a hand-wheel upon the valve stem, in the common and well known way, by means of which the valve can be raised or lowered independently, or as stated in the Orr patent, "The valve *d* can be operated by hand by revolving the wheel *m*, so as to raise or close the valve in the ordinary manner."

But this additional feature does not affect the question of infringement of Bailey's second claim.

And these views in regard to the infringement are admitted to be correct by the witnesses for the defendants, who testify as follows:

Mr. Stoddard testifies (f. 103, 104):

"Q. 65. In the Bailey valve the adjustment is made by screwing down the cap so as to condense the spring and give greater pressure?

"A. Yes, sir.

"Q. Now, in the Orr valve how is the adjustment made?

"A. By this screw here, tightening these two parts together on the spring.

"Q. 67. What is the object of a spindle and hand-wheel on the Orr valve, which is connected with the valve proper?

"A. Well, that would be used, you might say, in a secondary adjustment, provided you had this set at 100 pounds, and you wanted more pressure than that on the hose, you could adjust it without altering this. (Showing.)

"Q. 68. Then, by means of this spindle and hand-wheel could you not set the valve down with such pressure that it would be inoperative?

"A. Yes, sir.

"Q. 69. Then the spindle and hand-wheel serve the same purpose as the pin and pin-hole in the Bailey valve?

"A. Precisely.

"Q. 70. Do you find any difference in the practical working of the two valves?

"A. One is intended for the same purpose as the other, excepting this pin-hole.

"Q. 71. That is as to the construction, but I mean the practical working.

"A. It is just the same. I do not see any difference in them whatever.

"Q. 72. They both serve to relieve the pressure on the hose?

"A. Yes, sir.

"Q. 73. And thus have the same means of adjustment except the difference in the mechanical method of applying it?

"A. Yes, sir."

Mr. Pardy likewise (f. 111–112).

Mr. Boone:

"Q. 16. Both of these valves are automatic in their operation, are not they?

"A. Both automatic in their operation.

"Q. 17. What is the use of the spindle and hand-wheel in the Orr valve?

"A. The hand-wheel is to operate the valve as a stop-cock.

"Q. 18. It is used for the purpose of screwing the valve down close upon its seat.

"A. Yes, sir.

"Q. 19. When it is screwed down close upon its seat that throws the spring out of action?

"A. Not necessarily.

"Q. 20. What is the object of the spring?

"A. The object of the spring is to provide for a load on the seat of this valve—to load the valve.

Q. 21. Then, when the water pressure increases above the strength of the spring, the valve lifts and the water escapes, does it?

"A. Yes, sir.

"Q. 22. Then, in order to operate the valve, the valve must be lifted from its seat, must it not, in order to let the water escape?

"A. Yes, sir.

"A. *Yes, sir.*

"Q. 23. Now, if that valve be screwed down by means of the spindle and hand-wheel, so that it cannot lift, what action can the spring have?

"A. That never occurs.

"Q. 24. But I ask if it were turned down so that it could not lift, what action does the spring have; would that not throw the spring out of action?

"A. There would be no spring then. That is a thing that never occurs, because the spring—you would not have to close the spring entirely and make it solid before that could occur. The spring is always in action until it is closed up in one solid mass.

"Q. 25. I ask you if the hand wheel be turned so as to set that valve down, so that it could not lift it all?

"A. It won't lift.

"Q. 26. Then it is of no use—really is out of action?

"A. Yes, sir.

"Q. 27. Then, would not it be an equivalent to the pin and pin-hole in the Bailey valve in that condition?

"A. It would be the same thing."

Also Mr. Deacon, (r. 134, 135, 136, 139.)

"Q. 30. Then what difference, if any, is there between the arrangement of the Bailey valve, as shown by the drawing in the Bailey patent, and the arrangement of the Orr valve as used by the steam fire department?

"A. One is on the discharge pipes and the other is connected direct on the pumps.

Cross-examination by Mr. Boone:

"Q. 1. Both accomplish the same purpose, do they not?

"A. Yes, sir.

"Q. 2. Their relative arrangement is the same—the relation the valve bears to the engine and the hose?

"A. Yes, sir.

"Q. 3. Do you find in the Orr valve any equivalent of the pin and pin-hole in the Bailey patent?

"A. No, sir.

"Q. 4. None whatever?

"A. No, sir.

"Q. 5. You state that you are a machinist, do you?

"A. Yes, sir.

"Q. 6. When the spindle in the Orr valve is turned down by means of the hand-wheel, so as to be set permanently and fixedly on its seat, then is the spring in the Orr valve operative?

"A. When it is screwed down on the seat; yes, sir.

"Q. 7. Does not the pressure of the water come on the under side of this valve?

"A. Not always.

"Q. 8. But I am speaking of the valve, the defendants' 'Exhibit A.'

"A. No, sir.

"Q. 9. Where does the pressure come?

"A. It comes on the inside of the screw cap.

"Q. 10. Then, if the spindle be turned by means of the hand-wheel, so as to draw the valve close up against the end of the opening underneath the valve, where would the pressure come?

"A. Then you are using it as a churn valve.

"Q. 11. Then the spring is inoperative, is it not?

"A. Yes, sir.

"Q. 12. Then the pressure in the pipe would have no effect whatever on the spring?

"A. No, sir.

"Q. 13. It shuts the water off from the relief valve, does it not?

"A. You are using it then as a churn valve.

"Q. 14. The spring, though, is thrown out of use?

"A. Yes, sir.

"Q. 15. Both valves operating produce the same result?

"A. Yes, sir."

"Q. 25. The effect on the hose would be the same with either the Bailey valve or the Orr valve, would it not?

"A. Just the same, yes, sir.

"Q. 26. In the Bailey valve, when the pin is used in the pin-hole, has the spring any action to perform?

"A. No, sir.

"Q. 27. The spring is thrown out of use entirely?

"A. Yes, sir.

"Q. 28. Then it is immaterial whether the tension on the spring is great or small, is it not?

"A. It don't make any difference.

"Q. 29. So that the adjustment of the cap, in order to get the pin-holes in line, would not matter if the pin was to be used in the pin-holes?

"A. No."

Mr. Pardy, being recalled, testified as follows (158, 159):

"Q. 47. What is the difference in the mechanical construction of these two valves?

"A. There is a great deal of mechanical difference in the construction, but none in the functions of the valves.

"Both valves have the same functions, excepting that the Orr valve performed its functions in a much better and improved way; for, when the valve is operated as a stop valve, it does not necessarily interfere with the tension or adjustment of the spring.

"When you operate with the Bailey valve as a stop valve you do necessarily interfere with the adjustment of the spring.

"In this respect I consider the Orr valve improved upon the Bailey valve.

"This is a great difficulty in using these valves on fire engines, because, if the valve is once adjusted to perform for a certain pressure upon the hose, every time that you have occasion to use the valve as a stop valve, with the Bailey valve the adjustment is lost, and it is often troublesome to attain the exact adjustment again. That is the way I interpret it. This is not the case with the Orr valve.

"Q. 48. Will you please look at the second claim of the reissue patent, and state whether, from the combination of the elements therein mentioned, you can operate that valve as a stop valve.

"A. Well, there is the absence of a pin; you can't do without a pin, and that is not in the combination.

"Q. 49. Then, in order to operate the Bailey valve as a stop valve, an element not mentioned in the combination in the second claim of the patent would have to be introduced to work that result?

"A. Yes, sir; the pin would be just as important as the hole into which the pin goes."

It would appear, then, from the testimony of defendants' witnesses, that all of them who testified upon the question of infringement, admitted that the Orr valve was an infringement of the second claim of the Bailey patent, one of them, however, thinking that the Orr valve was a better valve than the Bailey valve.

GEO. W. DYER,
For Complainant.

WASHINGTON, D. C., *October*, 1884.

113-679

JAN 26 1885

In the Supreme Court

OF THE

United States.

No. 155, October Term, 1884.

CHAS. E. BLAKE,

Appellant.

VS.

THE CITY AND COUNTY OF SAN FRANCISCO AND OTHERS,

Respondents.

BRIEF FOR THE RESPONDENT.

WILLIAM CRAIG,

Counsel for Respondent.

Filed, ... , *A. D. 188*

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1884.

Supreme Court

OF THE

United States.

No. 155. OCTOBER TERM, 1884.

CHARLES E. BLAKE,
Appellant,
vs.
THE CITY AND COUNTY OF SAN FRANCISCO AND OTHERS,
Respondents.

BRIEF FOR THE RESPONDENT.

STATEMENT.

The appellant brought suit in the Circuit Court of the United States, for the District of California, to obtain an injunction against the defendants.

The Court dismissed the bill, and complainant appealed to this Court.

The bill alleged an infringement by the defendants of re-issued patent No. 7,886, issued to the complainant September 18th, 1877, as assignee of one Thomas H. Baily, to whom the original patent, No. 41,471, was issued February 9th, 1864.

The improvement, as described in the specifications accompanying the re-issued patent, was: First, the combination with a pump cylinder and hose of a fire engine, of an automatic relief valve, arranged relatively thereto substantially as specified; second, the combination of the valve C, stem *d'*, spring E, adjustable cap D, and pin hole *d*, whereby the valve may be either held upon its seat with a variable yielding pressure, or may be elevated therefrom, or held immovably thereon, as an ordinary screw plug. The illustrating drawing is found opposite page 71 of the printed record.

The answer of the defendants denied the infringement; denied that Baily was the original inventor of the improvements described in the original patent; denied that the re-issue was for the same invention; asserted public use and sale more than two years previous to Baily's application, and admitted that they were using relief

valves like those described in the patent granted to G. S. Orr, May 19, 1874, No. 153,045.

The several letters patent referred to were put in evidence; and witnesses were examined upon the issues. And there was also put in evidence by the defendant an English publication of 1856, describing an invention patented in England to one Armstrong, and also an English publication of 1862, describing the floating engines of Merryweather & Sons.

I.

The evidence shows that the improvement described in the Baily patent, and the re-issued letter to plaintiff, was in common use in this country and England many years before the application for original patent.

The essential features of the relief valve described in the plaintiff's patent were that it was an automatic relief valve applied to a steam pump, adjustable to a varying pressure. The claim that it could be adjusted to so high a pressure as to be immovable, or to so light a pressure as to offer no resistance, seems to be involved in the principle of adjustment to variable pressure.

It will be observed that the opening of the valve is effected by a direct pressure of the fluid upon the valve itself, and not, as in the Orr patent, by the pressure upon a piston connected with the valve; also, that the valve is held upon the seat by the pressure of a spring, the tension of which may be varied.

It was proved on the trial that these features of automatic safety valves were long in use by the public. It was directly admitted on the trial that such was the case. This admission is found in folio 54; and in folio 62 the plaintiff testifies that what he claims to be new is the combination with the pump, cylinder and hose of a steam fire engine. And, again, in folio 65, he fully explains that he considers the novelty of his invention to consist in its application to a fire engine and hose.

Independently of the admissions, the evidence fully showed that automatic relief valves adjustable to relieve fluids under varying pressure were long in common use. See the testimony of George Pardy, in folios 105 *et seq.*, in folio 114. The witness states that the common safety valve of a boiler would act the same way as the Baily or Orr valves, if applied to a steam fire engine. And again, in folios 147 to 176, the testimony explain-

ing defendant's Exhibits E, G, and H, a copy of these exhibits is here shown, makes it apparent that as automatic relief valves they have all the essential features and perform all the functions of the Baily valve. It is conceded, also, in the brief of appellant, at bottom of page 11, that, in connection with steam engines, automatic adjustable safety valves capable of being permanently opened were in use prior to the Baily patent.

The claim of the plaintiff is narrowed to the mere application of well known safety valves, to use upon steam fire engines. This claim is not tenable for two reasons:

The first is that the principle of automatic adjustable safety valves, being once applied to relieve an undue pressure in any particular confined fluid, as steam, for instance, its application to relieve pressure in any other confined fluid, as air in compressed air engines or in water pumps, is too obvious to be deemed an invention.

The second reason is that the evidence clearly shows that automatic relief valves had been used in connection with water pumps operated by steam. A steam fire engine is a portable water pump operated by steam. The necessity for automatic relief valves, and the conditions under

which they act, are the same in all water pumps, whatever may be the useful end to which the pumping is addressed. But if there be any point in the fact that the pumping in fire engines is directed to the extinguishment of fires, there is still no novelty in Baily's combination.

It appears from Defendant's Exhibit B (folio 247), as illustrated in the accompanying drawing, that automatic relief valves had been combined with steam fire engines upon fire boats built by Merryweather & Sons, and their action explained in an English printed publication. And further, that a valve having like functions and combinations was patented to William George Armstrong. It is explained in folio 244, and its action is illustrated in the accompanying drawing. The appellant says that no testimony was offered to explain the use of these improvements, but the publications were put in evidence, and they sufficiently explain the operation of the valves referred to.

It is objected that these valves so used upon steam fire engines did not fully perform all the functions of the Baily valve. Our reply is, that substantially they do. But the especial attention of the Court is addressed to this proposition: Automatic adjustable relief valves performing *all* the functions of the Baily valve are conceded and

proved to have been used upon steam boilers, and automatic relief valves having *some* of the functions of the Baily valve are conceded and proved to have been used upon steam fire engines and pumps. These facts rob the combination by Baily of the former class of relief valves to steam engines of every element of invention. The novelty in the idea of applying automatic relief valves to steam fire engines is exhausted upon the application of *any* automatic relief valve thereto; and if improved patterns of automatic relief valves are in common use upon steam boilers, the idea of applying them to steam fire engines would not be a new idea. And it is upon the combination alone that any claim has been or could be asserted.

II.

The second or re-issued patent cannot be deemed to be in issue at all, there being no allegation of novelty in the bill, nor, indeed, is there any allegation of novelty in the combination with engine and hose.

Curtis on Patents, § 350.

III.

There is no allegation of monopoly of use on sales.

Vaughan vs. *C. P. R. R. Co.*, 4 Sawyer, 280; 11 Wallace, 534.

IV.

The question of whether an invention is patentable is not special matter, and evidence may be given under the general issue.

Reckendorfer vs. *Faber*, 2 Otto, 347–354.

V.

Upon the general question of novelty the following authorities are submitted:

Curtis on Patents, §§ 49, 55, 56.
Roberts vs. *Ryer*, 1 Otto, 157.
Hailes vs. *Van Wormser*, 20 Wall., 353.
Rauson vs. *Mayor*, 1 Fish, 226.
Clarke vs. *Steam Fire Eng.*, 2 Id., 221.

WILLIAM CRAIG,
Counsel for Respondent.

113-684

FILED
JAN 7 1885
JAMES H. McKENNEY,
CLERK

IN THE

Supreme Court of the United States,

OCTOBER TERM, 1884.

FOURTH NATIONAL BANK, OF ST. LOUIS,
Appellant.

vs.

A. L. STOUT, *et. al.*, - - *Respondents.*

ABSTRACT OF RECORD AND ARGUMENT.

B. D. LEE,
Solicitor for Appellant.

ST. LOUIS: PRINTED BY THE CENTRAL LAW JOURNAL.

IN THE

Supreme Court of the United States,

OCTOBER TERM, 1884.

FOURTH NATIONAL BANK, OF ST. LOUIS,
Appellant.

vs.

A. L. STOUT, *et. al.*, - - *Respondents.*

The appellant herein, by way of answer to the motion filed herein, by respondents, to dismiss the appeal, by appellant, from the decree of the Circuit Court of the United States for the Eastern District of Missouri, respectfully submits, for the consideration of the court, certain facts appearing in the record of this case, which seem to appellant necessary and proper to place before the court, in determining the question of jurisdiction presented by this motion.

ABSTRACT OF RECORD.

The bill of complaint which was originally filed by the respondents, Stout, Mills & Temple, as judgment creditors of the Yeager Milling Company (a corporation) in the sum of eighty-seven hundred and eighty-nine dollars ($8,789) against the Yeager Milling Company, the Citizens Insurance Company, the Second National Bank, the Fourth National Bank, John Crangle, Henry C. Yeager, George D. Capen, Arnold Hussman, H. D. McLean and G. L. Joy, charges

that the individuals above named as respondents, composed the board of directors of said Yeager Milling Company; and that when said company became insolvent they appropriated all of the assets of the company to pay certain claims which were alleged to be due to themselves, and the corporations, above named as respondents, in which they were interested as officers, or directors.

The bill further alleges that there were two classes of assets or property, to-wit:

First. The proceeds of certain insurance policies, aggregating $179,500.00, upon the mill and machinery of the Yeager Milling Company, collected from the insurance companies after the destruction of the mill property by fire.

Second. The value of the lot and *debris* of the building and machinery remaining after the fire.

The bill of complaint further alleges that said lot, *debris*, etc., were appropriated by the appellant, the Fourth National Bank, by accepting a deed of trust which was placed upon the lot after the fire to secure the sum of $20,000.00, and by a bill of sale of the personal property, to secure to it the payment of overdrafts and returned unpaid drafts, which had been discounted by appellant.

The bill of complaint further alleges that the indebtedness of said Yeager Milling Company to said Fourth National Bank was $120,000.00, or about that sum, on account of discounts, previously made by said bank for said Milling Company, of notes upon which the defendants George D. Capen and H. D. McLean, were personal endorsers in whole or in part.

The theory upon which the bill of complaint proceeds, is that, after the destruction of the mill property by fire in the month of August, 1880, the individual defendants, as directors of said corporation, became trustees of said corporation and charged with the duty of making distribution

of all the assets of said company amongst all creditors thereof, *pro rata*, and that the individual defendants, who composed the board of directors of said company were liable for a mis-appropriation of said assets, in this, that they had illegally and improperly preferred themselves and the corporations above named as defendants, and that they were liable to account to the complainants, Stout, Mills & Temple, for their *pro rata* share of said assets, and the bill prays for an accounting by the defendants but charges no actual fraud against them.

THE ANSWER.

The defendants, Arnold Hussman and the Fourth National Bank, made a joint answer to said complaint in which they admit that defendant Hussman held four shares of stock in said Yeager Milling Company, as trustee of said Fourth National Bank. The answer alleges that the indebtedness of said company to said Fourth National Bank, which was evidenced by the notes of said company, was more than $130,000.00, and that the overdrafts of said company, which had been paid by said bank, for account of said company, and which were then due, amounted, at the time said fire occurred, to more than $7,000.00; besides which, said bank had discounted the drafts drawn by said company upon various parties amounting to a large sum of money, some of which were unpaid.

The joint answer of said defendants, proceeds as follows: "They also admit that after said fire, said company decided "not to resume business, but to wind up the affairs of said "company, and they admit that no business has since been "done by said company, excepting to close up, as far as is "possible, its business affairs, by collecting the outstanding "assets of said company and making such disposition thereof, "as in equity and good conscience they were bound to do, as "is hereinafter set forth. These defendants deny that after

"ascertaining that the assets of said company were insuf-
"ficient to pay all of the liabilities of said company, the de-
"fendants herein conceived the purpose of appropriating all
"of the assets of said company to the payment of their own
"claims in full, in the manner alleged in said bill of com-
"plaint, excepting in the manner and for the reasons here-
"inafter set forth."

"These defendants also admit that the said policies of in-
"surance were divided amongst the defendants herein, about
"as follows, to-wit: $125,000 to this defendant, the Fourth
"National Bank." The answer then designates the other beneficiaries of these policies of insurance, and then proceeds as follows: "These defendants further admit that
"the Fourth National Bank claimed other sums due to it
"from said Milling Company, in addition to the notes men-
"tioned in complainants' bill of complaint, for more than
"the sum of $20,000, for overdrafts and for discounts made
"to said company, on certain drafts drawn by it upon par-
"ties who failed to pay such drafts, but they deny that said
"Fourth National Bank claimed as much as $20,000 on ac-
"count of drafts so drawn by said company, which were re-
"turned unpaid, and deny that they proceeded to appropri-
"ate all the remaining assets of said company for the pur-
"pose and in the manner stated in said bill of complaint."

"Further answering herein, these defendants admit that
"a deed of trust was executed by said Milling Company
"upon the real estate belonging to said Yeager Milling Com-
"pany and more fully described in complainants' bill of
"complaint, for the purpose of securing to the said Fourth
"National Bank, payment of certain checks, drafts, and
"overdrafts which were made by said Yeager Milling Com-
"pany upon said Bank, and by it paid, and that a bill of
"sale of certain personal property consisting of the *debris*
"remaining after said fire, was also made to further secure
"said Bank on said checks, drafts and overdrafts under the
"following circumstances and agreement between said Bank

"and said Milling Company, to-wit: They say that on the "morning after said fire, to-wit: on the 18th day of August, "1880, the account of said Yeager Milling Company, at said "Bank, was then overdrawn to the amount of about$ 7,000, "and checks and drafts of said Milling Company, on said "Bank, were then being presented at said Bank for payment, "which said Bank, not knowing the effect of said fire upon "the financial condition of said company, refused to pay un- "less the payment thereof, and said company's said other "overdrafts, then due, were secured to it by said company; "whereupon, in consideration that said Bank would pay and "honor certain checks and drafts of said Milling company "then presented, and which might be thereafter presented "at said Bank, and drawn by said Milling company "upon it, said Milling company then and there agreed with "said Bank to secure to said Bank the payment of said checks, "drafts and overdrafts of said company by transferring to "said bank sufficient of its assets to make said bank secure for "checks, drafts and overdrafts; whereupon, afterwards and "by reason of said agreement, the said Yeager Milling Com- "pany executed and delivered to said Bank said deed of "trust, and said bill of sale, of said personal property, con- "sisting of said *debris* resulting from said fire. That after "said agreement between said Milling company and said "Bank, so made on said 18th day of August, 1880, and upon "the faith and credit thereof, this defendant, the Fourth "National Bank, paid out upon the checks and drafts of said "company drawn upon it, under said agreement, more than "the sum of $8,000. That shortly after the sale, to it, of "the personal property, consisting of the *debris* of said fire, "and after taking possession thereof, and by and with the "advice and consent of said company, it sold and dis- "posed of the same, at a fair price, to-wit: at the "price of $3,000, which sum it has credited on "account of said checks made by said company, and paid by "it after the date of said agreement, and with reference to

"the said deed of trust, made by said company to said Bank, "these defendants say that at the time said deed of trust "was executed and delivered to said Bank, said real estate "was chargeable with mechanics liens for work and materi- "als furnished to said company, which, under the laws of "the State of Missouri, created an incumbrance upon said "property, prior to said deed of trust; that one of said "claims was in favor of the Fulton Iron Works, a corpora- "tion, created under the laws of the State of Missouri, up- "on which such steps were begun, followed by suit, in the "Circuit Court of the City of St. Louis, that a special judg- "ment was rendered against said property and the same was "subsequently sold by the sheriff of the said City of St. "Louis under execution issued upon said judgment to one "Louis J. Holthaus; and afterwards certain other suits, by "attachment, were also begun against said company, where- "in said property was seized, and afterwards judgments were "recovered against said company, under said attachment "suits, one of which remained unsatisfied of record, the "same being in favor of John Wall, and against said com- "pany, for the sum of $3,318.90, and the other, under "which said property was sold, was in favor of H. C. Cow- "gill *et al.* against said milling company, for $260.61, all of "which judgments were prior, in date, to the judgment of "complainants, against said milling company; and were also "prior liens and incumbrances upon said property. And "defendants further say that said deed of trust so made to "them by said milling company, as they are informed and "believe, is worthless, in this, that the title to said property "under said deed of trust is worthless and now gives to them "no security whatever upon said property, and they say that "the title to said real estate is, as they are informed and be- lieve, now fully vested in one E. Jungenfeld." The answer then proceeds to state that all of these policies of insurance which existed at the time of the fire upon the property of the defendant milling company had been previously

pledged and hypothecated by said company, and were then in the hands of certain persons to be held and kept up, as they expired from time to time, for the benefit of the Fourth National Bank and the Citizens Insurance Company for monies loaned by said corporations from time to time, to said milling company so that they might be continually protected in the event of loss or destruction of the property by fire. The answer further alleges that, after deducting the money received by said Fourth National Bank on account of said policies of insurance, and deducting also said $3,000 received by it from the sale of said "*debris*, of said mill, after said fire, there is still due said "Bank from said milling company more than $30,000.

To this answer a general replication was filed.

THE EVIDENCE.

The evidence taken and preserved in the record of this case fully establishes the allegations contained in the answer of these defendants, and it also establishes that defendants George D. Capen, and H. D. McLean, were endorsers upon notes of the Yeager Milling Company, which had been discounted by the Fourth National Bank, to the amount of $120,000, upon some of which paper, however, Capen was the sole endorser, and upon other paper said McLean was sole endorser, but that all of said paper was endorsed by one or the other of said parties.

There was evidence also that the deed of trust upon the mill property, to secure the payment of $20,000,00, was executed by the milling company by authorization of its board of directors, and that the bill of sale of the *debris*, which was made for the benefit of the Fourth National Bank, was also duly authorized by said Board of Directors; and that both of said instruments were made in pursuance of the arrangement made by the officers of the milling company with said Fourth National Bank, the morning

after said fire, when said Bank refused to pay the checks of said company, unless such security was given.

And it was also proved that more than $8,000, 00 was paid out by said bank, after said fire, under said arrangement, and that about the time said deed of trust was made, said Fourth National Bank agreed to apply the insurance money, received from said policies, in payment of the notes of said company endorsed by said Capen and Mc Lean.

The evidence further establishes, beyond question, the *bona fides* of the claim of the Fourth National Bank, against the milling company, as asserted in the answer above set forth.

The court rendered an interlocutory decree, a copy of which is given in the respondent's motion to dismiss this appeal, from which decree it will be seen that the court held that the policies of insurance, which had been pledged with the various creditors of the company, prior to the destruction of said property by fire, were lawfully so pledged to the payment of the claims of the several creditors to whom they were assigned after said fire, and that the defendants were not accountable to the complainants for the proceeds of said policies; but, that the real estate and the *debris* which were remaining after the fire, the defendants, as directors of the company, were bound to ratably apply, for the benefit of the general creditors, and that the appropriation of the same by the deed of trust and bill of sale of said personalty to the defendant, the Fourth National Bank, was an unlawful appropriation of said assets; and that the defendants, and said Fourth National Bank were bound to account therefor and pay the complainants their *pro rata* share thereof. And the decree further directed that a reference should be made to T. G. C. Davis, as special master, to state and report to the court an account of the amount due, *pro rata*, by the defendants,

charging the defendants with the value of said assets, at the date of said appropriation, subject only to the amount of any valid prior incumbrances then existing upon said assets, and allowing to complainants their *pro rata* share of said assets, computed with other unsecured and general creditors of the Yeager Milling Company.

And the court further decreed that the defendant, Henry C. Yeager, should account for the sum of $5,000,00 which he received as an unlawful preference.

In this interlocutory decree permission was given to other creditors to file intervening petitions *pro interesse suo*; whereupon, certain parties did intervene, claiming a *pro rata* share in said fund, under said interlocutory decree.

The report of the special master T. G. C. Davis was not approved, and under special instructions, the matter was re-committed by the court to special master, William Morgan, whose report and finding, omitting the formal part, is as follows:

"The report of T. G. C. Davis, special commissioner, to whom this case was originally referred, finds from the evidence submitted:—

First. That the value of the real estate of the Yeager Milling Company, on the 2nd day of September 1880, appropriated by the Fourth National Bank, on said day, was of value of - - - - - - -	$20,000 00
That the value of personal property of the Yeager Milling Company, which came into the possession of said Bank, on the said 2nd day of September, 1880, was -	7,900 00
Total value - - - -	27,900 00

Under the order of reference, of the 12th of June 1883, the undersigned master finds that the defendant bank is entitled to the following credits:—

Total value brought forward, -		$27,900 00
Amount paid by Bank for taxes on real estate, - - - - -	$2,137 35	
Amount paid by Bank to L. J. Holthaus for quit claim deed to property, - - - - -	2,500 00	4,637 35
		$23,262 65
Interest from 2d September, 1880, to July 1st, 1883, at 6 per cent., -		$3,950 77
		$27,213 42
Amount paid T. L. C. Davis, Esq., under order of court, - -		$600 00
Total amount for which Bank is liable, - - - - - - -		$26,613 42

I also find and report that the unsecured and general creditors of the Yeager Milling Company and the amounts of their respective claims, are as follows:

FOURTH NATIONAL BANK.—

Note dated June 5th, 1880, payable four months after date, - -		$30,000.00
On which the Bank collected before maturity, (Oct. 4th), - -	$17,186 37	
The interest on such payments chargeable to the Bank, the note not		

bearing interest from date, - -		17 40	17,203 77
			$12,796 23
After maturity there was paid at different dates the sum of, - -			$7,500 00
			$5,296 23
Interest on balance, including the deferred payments to 1st July, 1883, amounting to, - - -			$889 88
			$6,186 11
The notes and accounts allowed, amount to the sum of, - - -	$10,436 40		
Interest from their respective dates to 1st July, 1883, at 6 per ct.,	1,795 89		$12,232 29
The amount of overdraft is, -	15,426 49		
Interest to 1st July, 1883, at 6 per cent, - - - - - -	2,601 93		$18,028 42
Protest fees, etc., paid by Bank,	$41 55		
Interest, - - - - - -	6 70		48 25
Total amount found to be due Bank,			$36,495 07
Stout, Mills & Temple, recovered judgment v. Yeager Milling Co. in this court, on 12th April, 1881, for,			$8,787 06
Interest to 1st July, at 6 per cent,			1,170 14
			$9,957 20
H. D. McLean expended, in purchasing claims, the sum of, - -	$10,630 80		
The interest computed from date of purchase to 1st July, 1883, at 6 per			

cent, amounts to, - - - -	1,690 52	$12,321 32
Kidder, Peabody Co.'s claim, interest from 23d March, 1881, to 1st July, 1883, at 6 per cent., - -	$884 41	$7,371 53
Hunter, Craig & Co.'s claim, -	$2,502 81	
Interest from 14th May, 1880, to 1st July 1881, - - - -	$470 10	2,972 91
Anton Kufelke & Co., - -	$1,760 91	
Interest from 29th June, 1880,	317 55	2,078 46
The Merchants' Bank of Canada, balance due on drafts and damages for non-payment thereof, - -	$932 95	
Interest from 15th October, 1880,	151 76	1,084 71
Brown, Bros. & Co., - - -	$37 60	
Interest from 17th August, 1880,	6 58	44 18
First National Bank, of Chicago,	1,271 90	
Interest from 3d January, 1881,	190 37	1,462 27

The undersigned master under the order of reference herein finds and reports that the unsecured and general creditors of the Yeager Milling Company, are entitled to their respective *pro rata* against the Fourth National Bank, as follows, to-wit:

Stout, Mills & Temple, - -	$ 9,957 20	$ 3,591 32
Fourth National Bank, - -	36,495 07	13,162 87
H. D. McLean, - - -	12,321 32	4,444 01
Kidder, Peabody & Co., - -	7,371 53	2,658 72
Hunter, Craig & Co., - -	2,972 91	1,072 26
Anton Kufelke & Co., - -	2,078 46	749 66
Merchants' Bank, Canada, -	1,084 71	391 23

Brown Bros. & Co., - - -	44 18	15 94
First National Bank, Chicago, -	1,462 27	527 41

No further evidence was offered as to the claim of Henry C. Yeager, and under the decree of this court and the order of reference herein, it is found he has not established any claim against the Yeager Milling Company, and that he must account to the general creditors for the sum appropriated to his own use, on the 20th day of August, 1880, to-wit: $5,000 00, with interest at the rate of 6 per cent. from said date to July 1, 1883, - $859 16 $5,859 16

And that the *pro rata* to the general creditors out of said fund, are as follows:

Stout, Mills & Temple, - -	$ 790 66
Fourth National Bank, - -	2,897 63
H. D. McLean, - - -	978 38
Kidder, Peabody & Co., - -	585 34
Hunter, Craig & Co., - -	236 07
Anton Kufelke & Co., - -	165 03
Merchants' Bank, of Canada, -	86 13
Brown Bros. & Co., - - -	3 15
First National Bank, of Chicago,	116 11

The undersigned master also finds and reports that John Crangle collected assets of the Yeager Milling Co., in the sum of, - - - - - - $24,005 45

That he has proved claims against the Yeager Milling Co. amounting to the sum of $50,169.92, and that he is entitled to his *pro rata* out of said fund as against the Bank and Yeager fund, - - - - - $22,077 77

Leaving a balance for distribution of, - - - - - $1,927 68

In which the general creditors are entitled to the following *pro rata:*

John Crangle, - - - -	$780 17
Stout, Mills & Temple, - -	154 86
Fourth National Bank, - -	567 53
H. D. McLean, - - -	191 65
Kidder, Peabody & Co., - -	114 63
Hunter, Craig & Co., - -	46 24
Anton Kufelke & Co., - -	32 33
Merchants' Bank, Canada, -	16 87
Brown Bros. & Co., - - -	1 69
First National Bank, Chicago, -	22 75

Respectfully submitted,

WM. MORGAN,

Master *pro hac vice.*

The court thereupon rendered final decree, as follows:

FINAL DECREE.

"This cause coming on to be heard upon the exceptions to "the report of William Morgan, special master, *pro hac* "*vice*, filed by defendants, Arnold Hussman and the Fourth "National Bank of St Louis, and H. D. McLean, John "Crangle and Henry C. Yeager, after argument by coun- "sel, it is ordered by the court that said exceptions of said "several defendants, and each of them be overruled and "that said report be in all things confirmed, and upon con- "sideration it was thereupon ordered, adjudged and decreed "as follows, to-wit:

First. That the complainants, A. L. Stout, W. M. "Mills and John C. Temple, co-partners as Stout, Mills & "Temple, are judgment creditors of defendants, the Yeager "Milling Company in the sum of ($9,957.20) nine thousand "nine hundred and fifty-seven 100 dollars, said sum includ- "ing interest at the rate of six per centum to date of account- "ing July 1st, 1883."

Second. "That the following named parties allowed to "intervene as parties complainant herein, the bill of com- "plaint having been ordered to stand amended therefor, are found to be creditors of the defendant, Yeager Milling "Company, in the several sums hereinafter stated, said sums "including interest at rate of six per cent. to the date of "the accounting, July 1st. 1883."

Henry P. Kidder, Francis H. Peabody, Oliver W. Peabody, Geo C. Magone, co-partners as Kidder, Peabody and Company.
Seven thousand, three hundred and seventy-one 53-100 dollars - - - ($7,371.53)

R. Hunter Craig,
Doing business as R. Hunter Craig & Company.
Two thousand, nine hundred and seventy-two 91-100 dollars, - - - (2,972 91)

Anton Kufeke,
Two thousand, seventy-eight and 46-100 dollars, - - - - (2,078 46)

The Merchant's Bank of Canada,
One thousand, eighty-four and 71-100 dollars, - - - - (1,084 71)

The First National Bank of Chicago,
Fourteen hundred, sixty-two 27-100 dollars, (1,462 27)

Third. "That the said complainants and the several "intervenors severally have and recover of defendant, the "Fourth National Bank of St. Louis, the several sums "hereinafter stated, being their several *pro rata* shares, as "ascertained by the said report of the special master *pro* "*hac vice*, in the assets of the Yeager Milling Company, "heretofore found by the interlocutory decree herein of "October 30th, 1882, to have been wrongfully appropriated "by said Fourth National Bank of St. Louis, as follows:

"Stout, Mills & Temple,
Three thousand, five hundred and ninety-one 32-100 dollars, - - - (3,591 32)

"Kidder, Peabody & Co.,
Two thousand, six hundred and fifty-eight 72-100 dollars, - - - (2,658 72)

"R. Hunter Craig & Co.,
One thousand, and seventy-two 26-100 dollars, - - - - (1,072 26)

"Anton Kufeke,
Seven hundred and forty-nine 66-100 dollars (749 66)

"Merchants' Bank of Canada,
Three hundred and ninety-one 23-100 dollars (391 23)

"The First National Bank of Chicago,
Five hundred and twenty-seven 41-100 dollars (527 41)

$8,990 60

"And to have each his several execution therefor with "his costs except that the costs of proving the demand of "the First National Bank, of Chicago, shall not be taxed "against defendant."

Fourth: "It having heretofore been found by the inter- "locutory decree of October 30, 1882, that the defendants "are not accountable to the complainants or other general "creditors of the Yeager Milling Company for the distri- "bution of the proceeds of the insurance policy claims, set "forth in the bill of complaint, it is ordered that the bill of "complaint be dismissed as to the following defendants: "The Citizens' Insurance Company, the Second National "Bank of Louis, John Crangle, Henry C. Yeager, George "D. Capen, Arnold Hussman, H. D. McLean and George "L. Joy, being all the defendants except the Fourth Nation- "al Bank of St. Louis, and also dismissed as to said Fourth "National Bank, of St. Louis, as to said alleged distribu- "tion of the proceeds of the insurance policy claims."

Fifth: "The several intervenors having been admitted "as parties complainants upon their several undertaking to "contribute towards the expense of the litigation, it is or- "dered that they pay severally to complainants on account "of the expense incurred by them, enuring to the common "benefit of complainants and said intervenors as follows:

Kidder, Peabody & Co.,	$295 00
R. Hunter Craig & Co.,	119 00
Anton Kufeke & Co.,	83 00
Merchants' Bank, of Canada,	43 00
First National Bank of Chicago	60 00

Seventh: "That the costs of the suit excepting the costs "of proving claim of the First National Bank of Chicago be "paid by the Fourth National Bank of St. Louis, including "the allowances heretofore made to the respective Masters."

Eighth: "That said First National Bank of Chicago, pay "the costs by it incurred as hereinbefore stated."

From this final decree the Fourth National Bank upon giving bond in the sum of $20,000.00, was granted an appeal to this court.

ARGUMENT.

The court will perceive that the amount involved in this case, so far as the Fourth National Bank is concerned, is necessarily largely in excess of the several judgments which have been rendered against it by the decree of the Circuit Court. The issues which were necessarily raised by the pleadings in this case, involved not only the settlement and adjustment of the amounts which the complainants were entitled to receive out of the property alleged to have been unlawfully converted by the defendants in said suit, but also involved, the rights and liabilities of the defendants as between themselves.

The bill of complaint shows, and virtually, admits, that the milling company was indebted to the baak in the sum

of $120,000.00, and the proof shows that at the time of the destruction of the property by fire, the indebtedness of said milling company to said bank, together with the amounts advanced by said bank, immediately after the fire, amounted to more than the sum of $150,000.00.

In order to ascertain the amount due complainants out of this fund, under the issues presented by the bill and answer, and also under the directions given by the Court, in said interlocutory decree, it became necessary to make an adjustment of the rights of all of the parties to the bill, not only as between the said parties and the said milling company, but also as to the rights of the parties between themselves.

The accounting upon which the decree is based, and which, as we submit must be considered by the court in determining the jurisdiction herein, undertakes to forever settle and adjust the amount due by the Yeager Milling Company to the Fourth National Bank, and to each and all of its creditors. The report of the special master finds that the total amount due the bank after crediting it with the amount which it has received from the insurance company is $36,-495. 07, but this is not the whole amount claimed by the bank against the Yeager Milling Company, certain of its demands which were presented for allowance against said Milling Company were, by the master, disallowed.

It further appears, by the report of said special master, that he found that there is due from the Yeager Milling Company to John Crangle, one of the defendants herein, the sum of $22, 077.77, and that he is entitled to his *pro rata* out of said fund as against the Fourth National Bank fund, and the Yeager fund. And his *pro rata* upou that amount out of the fund, derived by the Fourth National Bank from the sale of this property exceeds the sum of $5,000.00.

While the final decree dismisses the bill as to all of the defendants, except as to the Fourth National Bank, the

master's report undertakes to state an account, and make a finding as to the rights of the parties defendant to this fund, and the final decree over-rules the exceptions and in all things confirms the report of said special master.

The argument of the respondents, in their motion to dismiss this appeal, only looks to that part of the decree which fixes the amount of the recovery of the complainants and the intervenors in the bill of complaint, whereas, other parts of the decree, and its direct effect upon appellant are wholly overlooked. *This Court will look at the whole decree*, and not simply to that clause of it which ascertains the amount that the respondents here have severally been adjudged to be entitled to recover against the appellant.

The master's report, by the final decree rendered herein, is in all things confirmed, and that report undertakes to settle and adjust the rights of all of the parties to the litigation, and the court below had no right to dismiss the bill as to the other defendants herein.

The cases cited by respondents in their brief, in support of their motion to dismiss, are not applicable to this case. In the case of Schwed v. Smith 106 U. S. 188, complainants claimed that the whole fund arising from the sale of the attached property had been obtained, by the defendant, by fraud and that the defendant had no legal or equitable right to hold the same as against the complainants ;whereas in the case at bar, the bill of complaint proceeds upon the theory that the fund appropriated by appellant, was one in which all the creditors, including the appellant, had a common right, and tenders an issue which made it absolutely necessary that the affirmative rights of appellant, as against the milling company and the other defendants, should be determined. And appellant cannot be denied its right of appeal because the court below saw fit, after the adjustment of these rights, to dismiss the suit as to all of the other defendants. The appellant's rights having been raised by the bill cannot be taken away from it by a dismissal as to the other defend-

ants in a case where the decree in its entirety reaches beyond the mere adjustment of complainants' demand.

Furthermore, it will be seen from the record, that this insurance money was applied to the payment of notes endorsed by defendant s George D. Capen, and H. D. McLean, about the time that the deed of trust upon the mill property was given to appellant, and that that application was made believing the security, so taken, would in great measure liquidate the demand of appellant against the milling company as to the other indebtedness of said milling company, in the nature of drafts, overdrafts &c., and it will be seen that there were equities existing between the defendants in said suit, which should have been adjusted and settled by the final decree, and which appellant had the right to demand an adjustment of. The defendants Capen and McLean were charged with the liability of having misappropriated the funds of the company, as directors thereof, in preferring the appellant as one of the creditors of the milling company, and the effect of such preference in being relieved from the payment of these notes under the circumstances existing at the time the application was made should have been considered and adjudged by the court below.

II.

We insist that we have a right of appeal, based upon the action of the court below, in dismissing the bill of complaint as to the defendant the Yeager Milling Company, because appellant was entitled to affirmative relief as against said company.

The accounting that was had, necessarily involved the question as to the amount of the indebtedness of said company to the Fourth National Bank, and that amount being ascertained by the court, it should have rendered judgment against that corporation for the amount so ascertained to be

due; and it was error in the court to dismiss this bill as to that defendant.

The rule in Courts of Equity is to render such a decree as will finally settle and determine the rights of all of the parties, and we have the right to insist that this rule be applied in our favor in this action.

Why should the appellant, the Fourth National Bank, be driven to the expense of an action at law against the Yeager Milling Company, after the large expense which has necessarily been incurred, to ascertain the amount of the indebtedness of the Yeager Milling Company to it in this proceeding?

The theory upon which the bill of complaint is drawn, necessarily contemplates the ascertainment, and settlement, of the amount due appellant from that company, and the answer claims an excess of over $30,000,00, after allowing the credit of $3,000,00 received from the sale of the personal property. And appellant was and is entitled to affirmative relief for the reasons above set forth.

We respectfully insist that the motion to dismiss this bill should be overruled.

B. D. LEE,

Solicitor for Appellant.

Office Supreme Court U. S.
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JAMES H. McKENNEY.
CLERK.

13-684

IN THE

Supreme Court OF THE United States

OCTOBER TERM, 1884.

[No. 1024

FOURTH NATIONAL BANK OF ST. LOUIS, - *Appellant.*

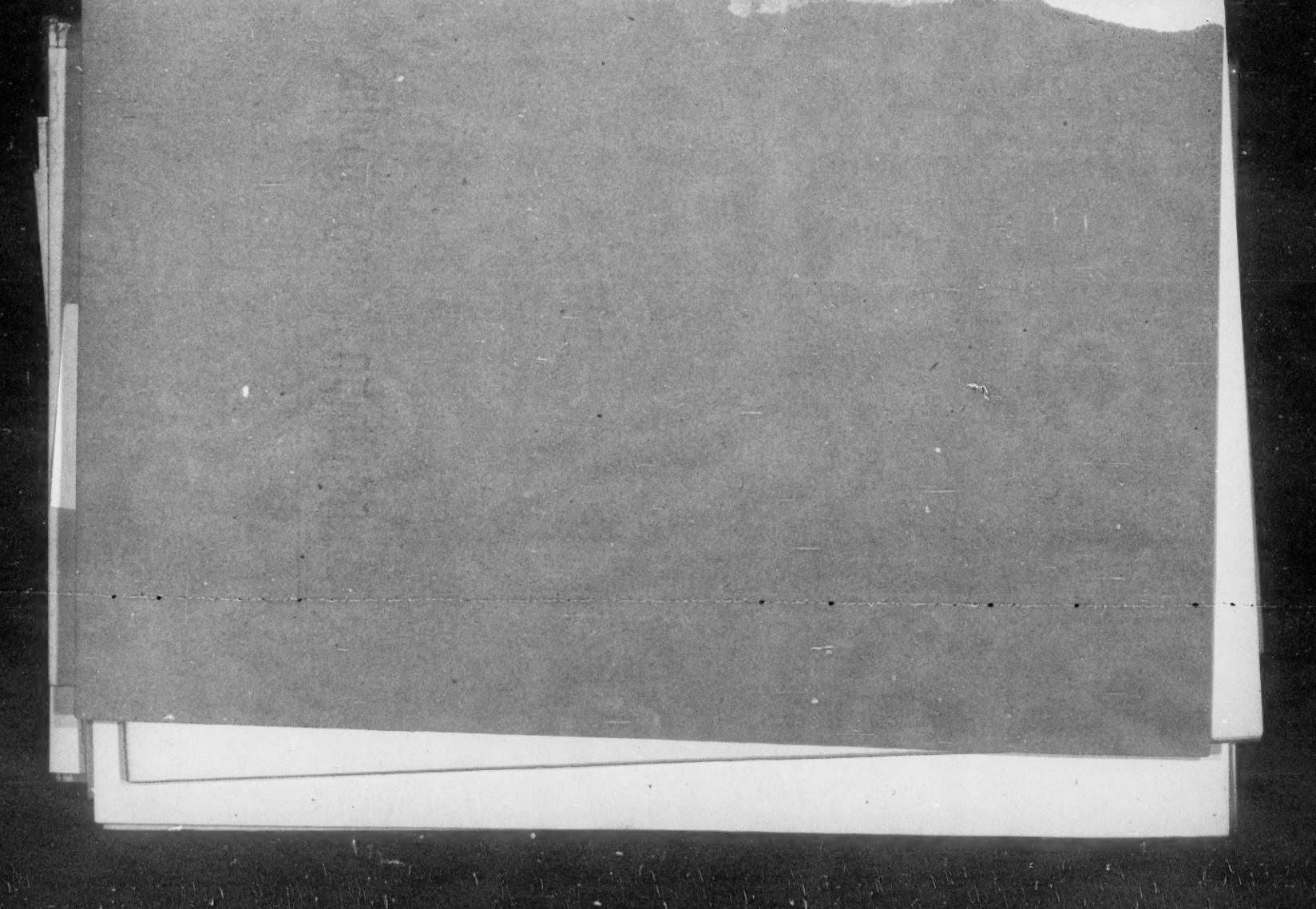
vs.

A. L. STOUT, ET AL., - - *Respondents.*

MOTION BY RESPONDENTS TO DISMISS APPEAL FOR WANT OF JURISDICTION, WITH ABSTRACT OF RECORD AND BRIEF.

FREDERICK N. JUDSON,
JOHN H. OVERALL,
With whom are
MILLS & FLITCRAFT,
For Respondents.

ST. LOUIS: PRINTED BY THE CENTRAL LAW JOURNAL.



IN THE

Supreme Court OF THE United States

OCTOBER TERM, 1884.

[No.]

FOURTH NATIONAL BANK OF ST. LOUIS,

Appellant.

vs.

A. L. STOUT, W. M. MILLS, JOHN TEMPLE, Partners as Stout, Mills & Temple;
HENRY P. KIDDER, FRANCIS H. PEABODY,
OLIVER W. PEABODY, and GEORGE C. MAGONE,
Partners as Kidder, Peabody & Co.;
ANTON KUFEKE, R. HUNTER CRAIG,
THE MERCHANTS BANK OF CANADA,
THE FIRST NATIONAL BANK OF CHICAGO, ILL.

Respondents.

Now comes the above-named several respondents, and show to the Court:

First: That the appeal herein by the appellant is from the decree of the Circuit Court of the United States for the Eastern District of Missouri, wherein several judgments are rendered against appellant and in favor of the above named respondents severally as follows, to-wit:

In favor of respondents, Stout, Mills & Temple, three thousand, five hundred and ninety one, 32–100, ($3591.32) dollars.

Kidder, Peabody & Co., two thousand, six hundred and fifty-eight, 72–100, ($2,658.72) dollars.

R. Hunter Craig, one thousand and seventy-two, 26–100 ($1,072.26) dollars.

Anton Kufeke, seven hundred and forty-nine, 66–100 ($749.66) dollars.

Merchants Bank of Canada, three hundred and ninety-one, 23–100 ($391.23) dollars.

First National Bank of Chicago, five hundred and twenty-seven 41–100, (527.41) dollars.

Second: That said final decree was rendered in a suit in equity, wherein respondents, Stout, Mills & Temple were complainants, and said appellant, the Fourth National Bank and other parties were defendants. That the several other respondents were severally admitted on petition to intervene *pro interesse suo*,—that the bill of complaint was dismissed as to all the other defendants, and that the only matters in dispute, involved in said appeal are the several judgments above set forth in favor of said several respondents and against appellant.

Third: That in each of said several judgments in favor of the several respondents and against appellant is involved less than the sum of five thousand dollars.

Wherefore respondents state that there is no jurisdiction in this honorable court to entertain said appeal,—in that there is no matter of dispute therein, involving more than the sum of five thousand dollars exclusive of costs, and they

severally pray that said appeal as to each of them be dismissed.

Frederick N. Judson,
John H. Overall,

For respondents, Stout, Mills & Temple and R. Hunter Craig;

H. E. Mills,
P. R. Fliteraft,

For respondents Kidder, Peabody & Co., Anton Kufeke, and First Nat. Bank of Chicago;

Chas. C. Allen,

For respondent, Merchants Bank of Canada.

SUMMARY OF RECORD.

The Bill of Complaint.

Respondents Stout, Mills & Temple, as judgment creditors of the Yeager Milling Company, (a corporation) in sum of (8,789.00) Eight Thousand, Seven Hundred and Eighty-nine Dollars, filed their bill against the Yeager Milling Company, the Fourth National Bank (the appellant), one Arnold Hussman and sundry other defendants, directors of said Yeager Milling Company, charging the said defendant, directors of and represented in the Board of Directors of the Yeager Milling Company, had when the company was insolvent and in liquidation, appropriated unlawfully all of the assets of the company to the payment exclusively of claims alleged to be due themselves, (the directors) and certain corporations and parties represented by them. The bill alleged the unlawful appropriation of two classes of assets:

First. The proceeds of certain insurance policies, aggregating (179,500.00) One Hundred and Seventy-Nine Thousand, Five Hundred Dollars, upon the mill and machinery of theYeager Milling Company, collected from the insurance companies after the destruction of the Mill property by fire.

Second. The value of the mill site, the lot and debris of building and machinery, alleged to have been appropriated after the fire and insolvency of the Milling Company, by (appellant) the Fourth National Bank, a stock-holder in the Milling Company, and represented in the directory by one of its own officers, defendant Hussman.

The bill of complaint alleged that these assets constituted, upon the insolvency and liquidation of the Milling Company, a trust fund, which the officers were bound to administer for the equal benefit of all entitled to share

therein, and demanded an accounting and decree for complaints' *pro rata* share thereof.

THE ANSWER.

Defendants severally filed answers. The bill being dismissed on hearing as to the alleged appropriation of the insurance money, the final decree appealed from relates only to the alleged appropriation by appellant, the Fourth National Bank of the second class of assets above mentioned.

We therefore set forth in full all that part of the answer of appellant (the Fourth National Bank) relating to the branch of the case in controversy in this appeal.

After denying other allegations of the bill of complaint, the answer proceeds:

"Further answering herein these defendants admit that a "deed of trust was executed by said Milling Company upon "the real estate belonging to said Yeager Milling Company "and more fully described in Complainant's Bill of Com- "plaint, for the purpose of securing to the said Fourth "National Bank the payment of certain checks, drafts and "over-drafts, which were made by said Yeager Milling "Company upon said bank, and by it paid, and that a bill "of sale of certain personal property consisting of the "debris remaining after said fire was also made to further "secure said bank on said checks, drafts and over-drafts, "under the following circumstances and agreement between "said Bank and said Milling Company, to-wit: They say "that on the morning after said fire, to wit: on the 18th day of August, 1880, the account of said Yeager Milling "Company at said bank was overdrawn to the amount "of about Seven Thousand Dollars, and checks and drafts "of said Milling Company on said bank were then being "presented at said bank for payment, which said bank, not "knowing the effect of said fire upon the financial condi- "tion of said company, refused to pay, unless the pay- "ment thereof and said company's said other over- "drafts then due were secured to it by said company: "whereupon in consideration that said bank would pay and

"honor certain checks and drafts of said Milling Company "then presented and which might be thereafter presented at "said bank and drawn by said Milling Company upon it; "said Milling Company then and there agreed with said "bank to secure to said bank the payment of said checks, "drafts and over-drafts of said company by transferring to "said bank sufficient of its assets to make said bank secure "for said checks, drafts and over-drafts. Whereupon af- "terwards and pursuant to said agreement the Yeager Mill- "ing Company executed and delivered to said bank said "deed of trust and said bill of sale of said personal property "consisting of said debris, resulting from said fire. That "after said agreement between said Milling Company and "said bank, so made on said 18th day of August, 1880, and "upon the faith and credit thereof, this defendant, the "Fourth National Bank paid out upon the checks and drafts "of said company, drawn upon it under said agreement, "more than the sum of eight thousand dollars. That "shortly after the sale to it of the personal property con- "sisting of the debris of said fire, and after taking pos- "session thereof, and by and with the advice and "consent of said company, it sold and disposed of the "same at a fair price, to-wit: at the price of three thousand "dollars, which sum it has credited on account of said "checks made by said company and paid by it after "the date of said agreement. And with reference to the said "deed of trust made by said company to said bank, these de- "fendants say that at the time the said deed of trust was "executed and delivered to said bank, said real estate was "chargeable with mechanic's liens for work and materials "furnished to said company, which under the laws of the "State of Missouri, created an incumbrance upon said prop- "erty, prior to said deed of trust; that one of said claims "was in favor of the Fulton Iron Works, a corporation "created under the laws of the State of Missouri, upon which "such steps were taken, followed by suit in the Circuit "Court of the City of St. Louis; that a special judgment "was rendered against said property and the same was sub- "sequently sold by the sheriff of the said City of St. Louis, "under execution issued upon judgment to one Julius J. "Holthaus, and afterwards certain other suits by attach- "ment were also begun against said company, wherein said "property was seized and afterwards judgments were re-

"covered against said company in said attachment suits, "one of which remains unsatisfied of record, the same being "in favor of John Wahl and against said company for the "sum of thirty-three hundred and eighteen and ninety-hun- "dreths dollars; and the other under which said property "was sold in favor of H. C. Cowgill, et al., against said "Milling Company for two hundred and sixty, 61–100 dol- "lars; all of which judgments are prior in date to the judg- "ment of complainants against said Milling Company, and "were also prior liens and incumbrances upon said proper- "ty. And defendants further say that said deed of trust so "made to them by said Milling Company, as they are in- "formed and believe, is worthless, in this, that the title to "said property under said deed of trust is worthless, and "now gives to them no security whatever upon said prop- "erty; and they say that the title to said real estate is, as "they are informed and believe, now fully vested in one E. "Jungenfeld. * * * * (After answering the alle- gations of claiming the alleged appropriation of the insur- ance money, not in controversy in this appeal, * * the "answer proceeds):

"And further answering herein, these defendants say that "after deducting the money received by said Fourth National "Bank on account of said policies of insurance, and deduct- "ing also said Three Thousand Dollars received by it from "the sale of said debris of said mill after said fire, there is "still due said bank from said Milling Company, more than "Thirty Thousand Dollars."

"And these defendants deny all and all manner of unlaw- "ful combination and confederacy wherewith they are by "the said bill, charged, without this, that there is any other "matter, cause or thing in the said Complainant's said bill "of complaint contained material or necessary for these de- "fendants to make answer unto, and not herein and hereby "well and sufficiently answered, confessed, traversed and "avoided or denied, is true to the knowledge or belief of "these defendants; all which matters and things these de- "fendants are ready and willing to aver, maintain and prove, "as this Honorable Court shall direct, and humbly pray to "be hence dismissed with their reasonable costs and charges "in this behalf most wrongfully sustained."

General replications being filed to the answers and testi-

mony being taken, the court upon hearing rendered the following interlocutory decree, which is here inserted in full.

INTERLOCUTORY DECREE.

First. "That all the assets of the defendant, the Yeager "Milling Company, which had not been theretofore lawfully "pledged to secure specific creditors upon the insolvency of "the company, became a trust fund, which the defendants, "the directors of such corporation were bound to apply "ratably to the payment of the debts of said corporation, "and not exclusively to the payment of their own unsecured "demands or any of them."

Second. "That the claims against insurance companies, "under policies of fire insurance outstanding on August 17, "1880, upon the property of the Yeager Milling Company, "had been theretofore lawfully pledged to the payment of "the claims of the several creditors, to whom the same were "assigned after the fire of August 17, 1880, and that defend-"ants are not accountable for the proceeds of said policy "claims to the complainants or the general creditors of said "company."

Third. "That the real estate and debris of building ma-"terial and machinery, remaining after the fire, described in "the bill of complaint, were general assets of the Yeager "Milling Company; which the defendants, the directors, "were bound to apply ratably to the general creditors; "and that the appropriation of the same by the defendants, "by the deed of trust of the said realty and the bill of sale "of said personalty, as set forth in the bill of complaint, to "the defendant, the Fourth National Bank, constituted an "unlawful appropriation of said assets; and that defendant "the Fourth National Bank, and defendants are bound to "account to and pay the complainants their *pro rata* share "of said assets, thus unlawfully appropriated to said de-"fendant."

Fourth. "That unless the parties hereto, within ten days "from the date hereof, agree upon the amount due to com-"plainants hereunder, the cause shall be referred to T. G. "C. Davis, special master, to state and report to the court

"an account of the amount due *pro rata* by the defendants, "charging the defendants with the value of said assets "appropriated at the date of said appropriation, subject "only to the amount of any valid prior incumbrance then "existing upon said assets, and allowing to complainants "their *pro rata* share of said assets; computed with other "unsecured and general creditors of the Yeager Milling "Company."

"The court further decrees that the sum of five thousand "dollars, received by defendant, Henry C. Yeager, was by "him unlawfully received, and that in estimating the *pro* "*rata* to which the plaintiffs are entitled, the said Yeager "shall account for said sum of five thousand dollars. being "allowed only his *pro rata* share of said sum."

OTHER CREDITORS PERMITTED TO INTERVENE.

After this interlocutory decree, the bill was ordered to stand amended, so as to permit other creditors of the Yeager Milling Company to appear and file intervening petitions *pro interesse suo*, and the following parties thereupon severally filed their several intervening petitions claiming to be creditors of the Yeager Milling Company in following sums:

Kidder, Peabody & Co., - -	$7,371 58
R. Hunter Craig, - -	2,972 91
Anton Kufeke, - - -	2,078 46
Merchant's Bank of Canada, - -	1,084 71
First National Bank of Chicago, -	1,462 27

The report of the Special Master, Davis, was filed and recommitted by the court to Special Master, William Morgan, with instructions.

The report of Morgan, Master, found the value of the real estate and personalty appropriated by the Fourth National Bank, $27,213.42, and the aggregate claims due by the Yeager Milling Company entitled to share therein,

$73,787.65, included in this last amount, was claim due by the Yeager Milling Company to the appellant, the Fourth National Bank, of $36,495.07.

The court thereupon rendered final decree as follows:

FINAL DECREE.

"This cause coming on to be heard upon the exceptions to "the report of William Morgan, special master, *pro hac* "*vice*, filed by defendants, Arnold Hussman and the Fourth "National Bank of St. Louis, and H. D. McLean, John "Crangle and Henry C. Yeager, after argument by coun- "sel, it is ordered by the court that said exceptions of said "several defendants, and each of them be overruled, and "that said report be in all things confirmed, and upon con- "sideration it was thereupon ordered, adjudged and decreed "as follows, to-wit:

First. "That the complainants, A. L. Stout, W. M. "Mills and John C. Temple, co-partners as Stout, Mills & "Temple, are judgment creditors of defendants, the Yeager "Milling Company in the sum of ($9,957.20) nine thousand "nine hundred and fifty-seven 100 dollars, said sum includ- "ing interest at the rate of six per centum to date of account- "ing July 1st, 1883."

Second. "That the following named parties allowed to "intervene as parties complainant herein, the bill of com- "plaint having been ordered to stand amended therefor, are "found to be creditors of the defendant, Yeager Milling "Company, in the several sums hereinafter stated, said sums "including interest at rate of six per cent. to the date of "the accounting, July 1st, 1883."

Henry P. Kidder, Francis H. Peabody, Oliver W. Peabody, Geo. C. Magone, co-partners as Kidder, Peabody & Company.
Seven thousand, three hundred and seventy-one 53-100 dollars - - - ($7,371 53)

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Doing business as R. Hunter Craig & Company.

Two thousand, nine hundred and seventy-two 91-100 dollars, - - - (2,972 91)

Anton Kufeke,
Two thousand, seventy-eight and 46-100 dollars, - - - - (2,078 46)

The Merchant's Bank of Canada,
One thousand, eighty-four and 71-100 dollars, - - - - (1,084 71)

The First National Bank of Chicago,
Fourteen hundred, sixty-two 27-100 dollars, (1,462 27)

Third. "That the said complainants and the several "intervenors severally have and recover of defendant, the "Fourth National Bank of St. Louis, the several sums "hereinafter stated, being their several *pro rata* shares, as "ascertained by the said report of the special master *pro* "*hac vice*, in the assets of the Yeager Milling Company, "heretofore found by the interlocutory decree herein of "October 30th, 1882, to have been wrongfully appropriated "by said Fourth National Bank of St. Louis, as follows:

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"Kidder, Peabody & Co.,
Two thousand, six hundred and fifty-eight 72-100 dollars. - - - (2658.72),
"R. Hunter Craig & Co.,
One thousand, and seventy-two 26-100 dollars (1072.26)
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Seven hundred and forty-nine 66-100 dollars (749.66),
"Merchants Bank of Canada,
Three hundred and ninety-one 23-100 dollars (391.23),
"The First National Bank of Chicago,
Five hundred and twenty-seven 41-100 dollars (527.41),

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"And to have each his several execution therefor with "his costs except that the costs of proving the demand of "the First National Bank of Chicago, shall not be taxed "against defendant."

Fourth: "It having heretofore been found by the inter- "locutory decree of October 30, 1882, that defendants are "not accountable to the complainants or other general credi- "tors of the Yeager Milling Company for the distribution "of the proceeds of the insurance policy claims, set forth "in the bill of complaint, it is ordered that the bill of com- "plaint be dismissed as to the following defendants: The "Citizens Insurance Company, the Second National Bank of "Louis, John Crangle, Henry C. Yeager, George D. Capen, "Arnold Hussman, H. D. McLean and George L. Joy, "being all the defendants except the Fourth National Bank "of St. Louis, and also dismissed as to said Fourth National "Bank of St, Louis, as to said alleged distribution of the "proceeds of the insurance policy claims."

Fifth: "The several intervenors having been admitted as "parties complainants upon their several undertaking to "contribute towards the expense of the litigation, it is or- "dered that they pay severally to complainants on account "of the expense incurred by them, enuring to the common "benefit of complainants and said intervenors as follows:

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Merchants Bank of Canada, - - -	43 00
First National bank of Chicago, -	60 00

Seventh: "That the costs of the suit excepting the costs "of proving claim of the first National Bank ef Chicago be "paid by the Fourth National Bank of St. Louis, including "the allowances heretofore made to the respective Masters."

Eighth: "That said First National Bank of Chicago, "pay the costs by it incurred as herein before stated."

APPEAL AND SUPERSEDEAS BOND.

From this final decree, the Fourth National Bank was allowed on appeal to this Court, giving one supersedeas bond to complainants, and the several intervenors, collectively in aggregrate sum of $20,000.

BRIEF.

For the purposes of determining the jurisdictional question involved in this motion, it is unnecessary to look beyond the final decree *supra*. But in order that the court may have before it, without the necessity of referring to the transcript on file, everything which can by any possibility throw light on the "matter in dispute" involved in the present appeal, we have printed all of the defendant's answer having relation thereto, and also the interlocutory decree, thus presenting substantially *all* the record, relating to the question of jurisdiction.

But the jurisdictional test is found in the final decree appealed from, wherein Stout, Mills & Temple, the complainants recover judgment against appellant in the sum of $3591.32, with costs, and each of the intervening creditors their several *pro rata* sums with costs, to-wit:

Kidder, Peabody & Company, -	$2658.72
R. Hunter Craig, - - -	$1072.26
Anton Kufeke, - - -	$749.66
Merchants' Bank of Canada, - -	$391.23
First National Bank of Chicago, -	$527.41

And each of said respondents being allowed his *several execution* for said *several judgment* and costs against appellant.

The following principles, established by the repeated decisions of this court conclusively show the want of jurisdiction.

First. As the appeal is brought by the defendant below, it is well settled that the amount of the judgment against it, is the "matter in dispute," no affirmative relief being sought.

Merrill v. Petty, 16 Wallace, 338.

Hilton v. Dickenson, 108 U. S. 165.

Second. As the final decree appealed from includes several separate judgments in favor of the several respondents, each of these several judgments constitutes a *separate* controversy, wherein the matter in dispute, i. e., the judgment exclusive of costs, must exceed $5,000.00, in order to confer jurisdiction upon this court, and that jurisdiction cannot be given to this court by *aggregating* these several judgments.

It is needless to cite the decisions rendered in analgous admiralty cases, where it has been held that claims of seamen united in one suit cannot be aggregated to give jurisdiction.

Rich v. Lambert, 12 Howard 347.
Oliver v. Alexander, 6 Peters 143.
Ex parte Baltimore & Ohio R. R. Co. 106 U. S. 5.

Nor need it be argued that the union of claims of separate creditors under a creditor's bill, where a fund in the hands of a third party is sought to be subjected to payment of the debtor's liabilities by separate judgments, falls within the rule of the cases above cited (and not under the other class of cases, as in Shields v. Thomas, 17 Howard, 3-6, where the entire amount is claimed under one and the same title), as this point has been expressly decided by this court.

Thus in Seavers v. Bigelow, 5 Wallace 208, which was the case of separate judgment creditors uniting a in creditor's bill, and the appeal was by complainants, whose bill was dismissed in the Circuit Court, jurisdiction was denied, the court saying:

"The judgment creditors who have united in this bill, "have separate and distinct interests, depending upon sepa- "rate and distinct judgments. * * * * It is true "the litigation involves a common fund, which exceeds sum "of $2,000.00, but neither of the judgment creditors has

"any interest in it, exceeding the amount of his own judg-
"ment. * * * * Indeed the joinder of parties
"complainant in the case of creditor's bills is so much a
"matter of form, that new parties may come in at almost
"any stage of the proceedings on proper application, and
"under special circumstances, even after decree, if they
"can show an interest in the common fund, and the party
"first instituting proceedings, may do so on behalf of him-
"self and all other creditors who may come in and assume
"their share of the costs and expenses."

Recently the rule thus established has been applied to a case substantially identical with one at bar, in Schwed v. Smith, 106 U. S. 188, where the appeal as here was taken by the defendant, both the *property in his hands* and the *aggregate of the judgments* against him *exceeding* the jurisdictional limit. The Court held that it was impossible to distinguish the case from Seaver v. Bigelow, saying: "The theory
"is that although the proceeding is in form but one suit its
"legal effect is the same as though separate suits had been
"begun on each of the separate causes of action. * * *
"Although the effect of the decree is to deprive Heller
"(the defendant) in the aggregate, of more than $5,000,
"it has been done at the suit of several parties on several
"claims, who might have sued separately, but whose suits
"have been joined in one for convenience, and to save ex-
pense."

It is submitted that Schwed v. Smith is decisive of the case at bar. To same effect, however are:

Russell v. Stansell, 105 U. S. 303.
Elgin v. Marshall, 106 U. S. 582.
Farmers Loan & Trust Co., v. Waterman, 106 U. S. 270.
Adams v. Crittenden, 106 U. S. 576.
Tupper v. Wise, 110 U. S. 398.

It follows therefore that inasmuch as each of the separate judgments in favor of complainants and the several

intervening creditors, permitted by the Court for convenience to litigate their claims in same proceeding (Seavers v. Bigelow *supra*) is less than $5,000, the jurisdiction of this court cannot be sustained by *aggregating* these *several* judgments.

Nor can the jurisdiction be sustained by the fact that the property *in defendants* hands, for which it was compelled to account, exceeded *in value* $5,000.

This precise point was presented in Schwed v. Smith, 106 U. S. 188, *supra*. The claims of respondents were none the less separate and distinct, and the matter in dispute in each, as determined by the judgment appealed from is less than $5,000.

Nor is it material that in the accounting, on which the final decree was based, the debt of the Milling Company to the appellant was found to be largely in excess of $5,000.00.

Appellant asked for no affirmative relief against complainants, and the question of jurisdiction has nothing to do with the *stages of the accounting* whereby the amounts of the several judgments were ascertained.

The jurisdiction rests on the amount of each judgment alone.

Merrill v. Petty, 10 Wallace 338.
Hilton v. Dickenson, 108 U. S. 165.
Schwed v. Smith, 106 U. S. 188.

We submit therefore that under the repeated and express decisions of this court, there is no jurisdiction to entertain this appeal, and that same must be dismissed.

FREDERICK N. JUDSON,
JOHN H. OVERALL,
With whom are
MILLS & FLITCRAFT,
For Respondents.

113-684

IN THE

Supreme Court of the United States,

OCTOBER TERM, 1884.

FOURTH NATIONAL BANK, OF ST. LOUIS,
Appellant.

vs.

A. L. STOUT, *et. at.*, - - - *Respondents.*

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF MISSOURI.

SUPPLEMENTAL BRIEF OF RESPONDENTS, ON MOTION TO DISMISS APPEAL FOR WANT OF JURISDICTION.

F. N. JUDSON,
J. H. OVERALL,
WITH ABOVE ARE,
MILLS & FLITCRAFT,
For Respondents.

ST. LOUIS: PRINTED BY THE CENTRAL LAW JOURNAL.

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SUPPLEMENTAL BRIEF FOR RESPONDENTS, ON MOTION TO DISMISS APPEAL FOR WANT OF JURISDICTION.

Respondents in submitting the motion filed by them to dismiss the cause for want of jurisdiction, concede, for the purposes of this motion, that the parts of record printed in appellant's brief, additional to what is printed with respondents' motion, are correctly stated, so that no question arises upon this matter of jurisdiction as to what the record contains.